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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Subject: Catawba Nuclear Station
Docket Nos. 50-413 and 50-414
1993 10 CFR 50.59 Report

Pursuant to 10 CFR 50.59, find attached a summary of all changes, tests, and experiments whcih were completed under the provisions of 10 CFR 50.59 from October 1, 1992 to September 30, 1993.

Very truly yours,

D. L. Rehn

GCD/5059COV.494

Attachment

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IE47
1/1

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Group File: 801.01
Catawba Document Control: 801.01

CATAWBA NUCLEAR STATION
SUMMARY OF PROCEDURE-RELATED 10 CFR 50.59
EVALUATIONS

PT/2/A/4350/15B, Change #12

Description
This change adds a section to the procedure so that the response of the Diesel Generator (D/G) to a step load increase while on an isolated bus can be measured.

Evaluation
This change is being implemented to satisfy retest requirements following replacement of the D/G governor. The test method used is identical to that used in PT/2/A/4350/12, Section 12.1, except that different pumps are being used to provide the load on the D/G. The pumps being used for this test are operated in their normal alignment. Starting pumps while the D/G is on an isolated bus is no different than the loading seen by the D/G during a sequencer actuation. This test has no effect on the ability of D/G 2A to supply essential power to Train A should the 2B D/G be unable to supply its loads. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

PT/1/A/4200/21A, Change #36

Description
This change added two enclosures to the procedure to allow testing of valves 1KC-51A and 1KC-54B under design basis conditions as required by Generic Letter 89-10.

Evaluation
This change has no impact on the flow and heat removal capacity for any loads normally aligned to the KC System. The KC pump flowrate under this change remains within limits associated with normal plant operation. No new failure modes were identified to be associated with this change. This change has no adverse affect on the ability of the KC System to supply post-accident loads. Equipment used or affected by this test are either isolated or operated in their normal alignment. No operating parameters nor design limits are affected by this change. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

PT/2/A/4200/21A, Change #13

Description
This change added five enclosures to the procedure to allow testing of valves 2KC-50A, 2KC-53B, 2KC-228B, 2KC-C37A, and 2KC-C40B under design basis conditions as required by Generic Letter 89-10.

Evaluation
This change has no impact on the flow and heat removal capacity for any loads normally aligned to the KC System. The KC pump flowrate under this change remains within limits associated with normal plant operation. No new failure modes were identified to be associated with this change. This change has no adverse affect on the ability of the KC System to supply post-accident loads. Equipment used or affected by this test are either isolated

or operated in their normal alignment. No operating parameters nor design limits are affected by this change. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

PT/2/A/4200/21A, Change #17

Description
This change added one enclosure to the procedure to allow testing of valve 2KC-51A under design basis conditions as required by Generic Letter 89-10.

Evaluation
This change has no impact on the flow and heat removal capacity for any loads normally aligned to the KC System. The KC pump flowrate under this change remains within limits associated with normal plant operation. No new failure modes were identified to be associated with this change. This change has no adverse affect on the ability of the KC System to supply post-accident loads. Equipment used or affected by this test are either isolated or operated in their normal alignment. No operating parameters nor design limits are affected by this change. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

PT/1/A/4200/27, Change #22

Description
This change deleted several unnecessary procedure sign-offs related to independent verification and acknowledgment by an SRO.

Evaluation
With regard to independent verification, it was determined that the specific steps did not require independent verification per the guidance given in Operations Management Procedure 1-5. For the SRO sign-off, it was determined that the intent of the step was met without requiring an SRO-signoff. These changes do not affect the test method and in no way affect the ability of the NW system to perform its intended function. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

PT/2/A/4200/27, Change #17

Description
This change deleted several unnecessary procedure sign-offs related to independent verification and acknowledgment by an SRO.

Evaluation
With regard to independent verification, it was determined that the specific steps did not require independent verification per the guidance given in Operations Management Procedure 1-5. For the SRO sign-off, it was determined that the intent of the step was met without requiring an SRO-signoff. These changes do not affect the test method and in no way affect the ability of the NW system to perform its intended function. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

EP/1/A/5000/1C, RETYPE #15

Description

This retype changes step 16. Due to poor throttling characteristics of valve 1NI-208, minor mod CE-4163 was performed to install a throttle valve downstream of 1NI-210. 1NI-208 has been returned to the closed position, 1NI-210 opened, and the new valve (1NI-482) throttled for a controlled bleed.

Evaluation

Since this retype only changes the procedure as needed to account for changes made to the plant and are described on a compensatory action, no further review of the FSAR beyond that performed for the mod and the comp action, is required.

HP/0/B/1003/11, RETYPE #10

Description

The purpose of this procedure is to provide a method of operation, calibration and source check for the Eberline Model RM-14. Changes within this retype improve efficiency in personnel/time management while ensuring all Technical Specifications are met. RM-14s at exit/release locations will still be source checked daily since these locations are the last survey point prior to equipment/personnel release. RM-14s located throughout the plant will be source checked weekly.

Evaluation

The original procedure was written before installation of the PCM Whole Body Counters and the Small Article Monitors located at each release point. The PCMs and SAMs are now our primary means of release for personnel and equipment. The contamination alarms indicated on the PCMs and SAMs are investigated by RP personnel using the designated RM-14s at each release point. This procedure does not affect any structures, systems, or components, It does not involve any test or experiments and does not require an unreviewed safety question evaluation.

HP/0/B/1004/02, RETYPE #7

Description

The purpose of this procedure is to provide guidance for RP Source Handling. The retype includes guidance to account for sources that do not require leak testing per CNS Tech Specs 3/4.7.9 but are greater than exempt concentrations and exempt quantities (Reference memo to WP Deal from RE Sorber, dated 6/18/91), to reduce paperwork, and to eliminate the need for RP/Inst. Cal personnel to log out sources used for calibration or source checks of instruments on a daily basis.

Evaluation

Upon completion of review of the FSAR and Tech Specs, the revisions to this procedure will not create an unreviewed safety question or require a change to Tech Specs; nor does it use or affect any safety related equipment. It is not used for the evaluation of accidents as described in the FSAR.

HP/0/B/1004/03, RETYPE #4

Description
This procedure provides guidance for leak test and inventory of radioactive sources. It was changed so that leak test of sealed sources is required only for sources that exceed the limits of Tech Spec Section 3/4.7.9. Sources that are greater than 100uCi beta and/or gamma emitting material or less than 5uCi alpha emitting material no longer require leak test and inventory by this procedure, but accountability of these sources will be maintained by adhering to HP/0/B/1004/02. These changes will clarify the source inventory and leak test requirements, documentation and filing. They will also reduce the number of sources requiring leak testing by adhering to the Tech Spec limits.

Evaluation
The procedure was changed to reflect requirements of CNS Tech Specs Section 3/4 7.9. This change does not constitute an unresolved safety question and does not involve equipment or systems that are safety related.

HP/0/B/1009/04, RETYPE #20

Description
This procedure provides guidance for environmental monitoring for emergency conditions within the ten mile radius of CNS. This retype specifies use of a single channel analyzer, as opposed to a portable multi-channel gamma analyzer for field iodine measurements and will require a change to FSAR Section 12.5.2.1.1, last paragraph. The single channel analyzer is easier to maintain and use. This change also affects FSAR Section 12.5.2.2.1, last paragraph. The new instrument only measures gross Iodine concentration and does not distinguish between particulate and gaseous Iodine. FSAR Section 12.5.3, page 12-35, second paragraph mentions "particulate", which needs to be deleted.

Evaluation
It was determined that the single channel analyzer meets the requirements for measuring Iodine concentrations, and can do so much more quickly than the multi-channel analyzer. In addition, air sample cartridges are saved after the initial analysis and can be re-analyzed at other locations such as the ASC or MNS, if more analysis is warranted. Changes made to this procedure do not involve systems, components or structures addressed in the FSAR and do not involve an unresolved safety question.

IP/0/B/3343/01, Change #13

Description
The purpose of this procedure is to provide guidance to perform the Met System (EEB) weekly cal check. This procedure change increases allowable ranges to equal the requirements listed in Reg. Guide 1.23 since new equipment was installed per Minor Mod CE-3706 and tolerances were not changed at that time.

Evaluation
The system operation described in the FSAR will remain the same. The new equipment installed under the minor mod exceeds the design basis of the recorders described by the FSAR. This system is not safety related and does not involve any equipment or system that is safety related. The probability or consequences of a malfunction of equipment important to safety as described by the FSAR, will not be increased. No operating parameters, safety limits, or setpoints will be changed; therefore, no margins of safety as defined by Tech Specs will be reduced. In conclusion, there will be no unreviewed safety questions created by this change and no changes to Tech Spec will be required.

IP/0/A/3850/09, Change #16

Description
This procedure provides guidance for inspection and maintenance on motor control center breakers. This change allows removal of the retaining spring clips from the 600 volt molded case circuit breakers whenever a breaker is removed from service for maintenance.

Evaluation
Retaining spring clips laying on the bus during maintenance creates a high potential for a fault to occur. PIR 0-C92-0770 deems this component as performing no useful function and creates a potential for a fault condition. This change will nor require any changes to the FSAR. System functions, as described by the FSAR, will not be affected by this change. This change does involve safety related equipment, but does not involve tests that have not previously been evaluated. The probability or consequences of a malfunction of equipment important to safety, as described by the FSAR, will not be increased. No operating parameters, safety limits or setpoints will be changed, therefore no margins of safety , as defined by Tech Specs, will be reduced. In conclusion, there will be no unreviewed safety questions created by this change and no changes to Tech Specs will be required.

IP/0/A/3850/23, Change #9

Description
This procedure provides guidance to the inspection and testing of molded case circuit breakers. This change adds the 125VDC distribution center feeder/incoming breakers to the CNS existing breaker testing and inspection program. These breakers will be tested in accordance with "Periodic Tests" as described by the FSAR section 8.3.2.1.2.3.2 and in accordance with Nuclear Generation Directive 3.2.2.

Evaluation
This procedure change will nor require a change to the FSAR. System functions, described by the FSAR, will not be affected by this change. This change does involve safety related equipment, but does not involve tests that have not been previously evaluated. The probability or consequences of a malfunction of equipment important to safety, as described by the FSAR, will not be increased. No operating parameters, safety limits or setpoints will be changed, therefore no margins of safety , as defined by Tech Specs, will be reduced. In conclusion, there will be no unreviewed safety questions created by this change and no changes to Tech Specs will be required.

IP/1/A/3181/01, Change #18

Description
The purpose of this procedure is to provide guidance for working with the Liquid Waste System (WL) safety related sump level control switches. This change changes steps in the procedure to verify that the pump is "on" when actuating the middle switch (Hi-Hi Level), reflects as-built conditions and makes the procedure agree with the correct logic for pump actuation.

Evaluation

This procedure change does not increase the probability or consequences of an accident or a malfunction of equipment important to safety evaluated in the FSAR. Neither does it create the possibility for an accident or a malfunction of a different type than any evaluated in the FSAR. This procedure change will not reduce the margin of safety as defined in the basis for any Tech Spec. Therefore, it is determined that no unreviewed safety questions are created as a result of this procedure change.

PT/0/A/4400/22A, Change #39

Description

The purpose of this procedure is to provide guidance for IWP testing of the Nuclear Service Water System (RN) Pumps for Train A. This procedure change adds an additional flowpath so that the flow specified as the reference value can be obtained (RN-to-CA flush line). After the pump data has been recorded and the RN flow through the line secured, RC will be used to backflush the RN-to-CA line to remove RN grade water left in the CA suction piping.

Evaluation

During the time that RN is flowing to RC, RN A Train will conservatively be considered inoperable due to the possibility of "starving" other components (KC, NS, KD, CA) of flow. However, RN B Train will be unaffected by this test, and would be able to perform its function in the event of an accident. Neither the possibility nor the consequences of any accident will be increased by this change since B Train RN is unaffected. Neither the probability nor the consequences of a malfunction of equipment important to safety will be created by this change. The margin of safety, as defined in the bases to Tech Specs, will not be reduced.

OP/2/A/6150/06, Retype #7

Description

The purpose of this procedure is to provide guidance for draining the Reactor Coolant System (NC). This procedure retype incorporates various human factor and editorial changes. Among the more significant changes, retype #7 changes references and some step sequences for reduced inventory from 6% to a more conservative 25%, changes Limit and Precaution (L&P) 2.2 to state requirements for operation below 6.5% level regardless of the reason for draining the NC System, L&P 2.23 changed to when NC System level should be maintained to greater than or equal to 6.5% when fuel is in the core, added Enclosure 4.11 to provide draining of S/G tubes via nitrogen injection during initial drain of NC System, during vacuum refill or when filling refueling cavity, added step 2.15 to Enclosure 4.1 to ensure the PZR is not pressurized prior to opening 2NC-300, step 2.2.9 of Enclosure 4.2 and the caution prior to step 2.2.9 were added to allow the option of increasing the drain down rate for completely draining the NC loops by closing the NCDT outlet and recirc valves, moved step to drain S/G bowls to allow maximizing core cooling flow during bowl drain operations, added L&P 2.28 to ensure S/G tubes are drained prior to fill & vent if the NC System is drained below 20%, and changed step 2.19 of Enclosure 4.10 to require all 4 power sources available to ensure ND operability.

Evaluation

All changes associated with Retype #7 were designed to enhance the performance of this procedure incorporating current Human Factors philosophies. These changes will not result in a degradation of any system. The operation of the NC System as discussed in the FSAR Section 5.4.7 and the NV System as discussed in FSAR Section 9.3.4 and the accident analysis of Chapter 15 will not be changed. No unreviewed safety question is judged to be created.

OP/0/B/6200/23, Retype #2

Description

The purpose of this procedure is to provide guidance for operating the RN System chemical addition system. This procedure retype is being revised to meet current NPDES requirements. The current discharge limits for CT-1 have dropped from 1.2 ppm to 0.4 ppm at Outfall 001. Also, biomonitoring was added as a requirement in the latest NPDES permit. These changes, along with the addition of instructions for the vendor injection and detoxification were added to this revision.

Evaluation

The effect of this test on the current RN System flow balance was discussed and the discussion determined that based on the current RN System balance, which was performed with 2 pumps, that this procedure would not reroute an amount of RN flow to RF that would cause RN flow to fall below the flow balance criteria. This assumes no more than 100 gpm flow is available to each RN/RF hose rack. These changes better reflect the injection process and will not have an adverse affect on the safe operation of the plant. Therefore, this revision does not: affect structures, systems, or components that are addressed in the FSAR in a significant manner, appear significant enough as to require inclusion into the FSAR, involve procedures as described in the FSAR in a significant manner, involve tests or experiments not addressed in the FSAR. No unreviewed safety question exists.

OP/1/B/6300/01, Change #35 (CIV #2) & #36 (CIV #1)(Both Changes Restricted)

Description

The purpose of this procedure is to provide guidance for operation of the turbine generator. These procedure changes temporarily adds new Enclosures (Stop Valve #1 LH Leak Repair) which will be used to repair the LH leaks with the unit on-line in the event the leaks increase.

Evaluation

During performance of these enclosures, all Turbine Trips and Overspeed Protection will be available. GE has reviewed the work plan and concurs that the guidance set forth by the enclosures will allow successful repair of the leaks while on-line. The Turbine Generator will not be operated outside of its design and operating parameters, no unreviewed safety questions are judged to be created by this change.

MP/0/A/7150/05, Retype #10

Description

The purpose of this procedure is to provide guidance for ice basket weight determination. This retype clarifies the process, eliminates unnecessary steps, and equipment weighing process, and places data shects in more logical and useable order. The most significant change involves the "On-line Weighing Method", in that the dial indicator is unnecessary. The retype also reduces the number of consecutive weights from eight to five.

Evaluation

The dial indicator was used to monitor the amount each ice basket was lifted as the weighing progressed. Experience has shown that the dial indicator is unnecessary and the use of a 1/2 pump stroke between weights is sufficient. Also, five weights has proven to be more than adequate to establish the weight of an ice basket. This procedure has been compared with Tech Specs, the FSAR, design documents, and station procedures to ensure

that the actions it controls will provide accurate ice basket weights to support the surveillance requirements of Tech Specs and the accident analysis as described in the FSAR. Since the ice Baskets will be maintained in an operable condition through the use of this procedure the possibility of a malfunction will be reduced, therefore no unreviewed safety question exists.

MP/0/A/7150/016A, RETYPE #1

Description

The purpose of this procedure is to provide guidance for Centrifugal Charging Pump corrective maintenance. This procedure was retyped to incorporate procedure changes 0 to 6, which significantly changed the procedure as a whole.

Evaluation

This procedure affects Technical Specifications 3.1.2.1, 3.1.2.3, 3.1.2.4, 3.5.2, and 3.5.3. Operations has the responsibility and the procedures for compliance with these Tech Specs, as this procedure is only used for system pump corrective maintenance. Maintenance will be performed on this pump only when these Tech Specs allow, per Operation's procedures. This retype will clarify and assure that maintenance activities will return the pumps to as-designed conditions and has been reviewed against approved vendor manuals, design documents, and station procedures to ensure the corrective maintenance controlled by this procedure will return the pump to as-designed condition. This also ensures compliance to the FSAR accident analysis.

MP/0/A/7150/039, RETYPE #8

Description

The purpose of this procedure is to provide guidance for Reactor Coolant Pump Seal Removal and Replacement. This procedure was retyped to incorporate procedure changes 0 to 10, which significantly changed the procedure as a whole. Specific guidance was added for ensuring #1 Seal Ring and Runner are matched, to ensure all identification information for the new EPDM o-rings installed during the seal rebuild is recorded, removed all interference items identified in the prerequisites, allows procedure section 11.1 and 11.2 to be performed prior to NC System drain, moved certain procedure steps from the procedure section to an Enclosure since they are not part of a normal seal rebuild, requires a TIR check without the o-ring installed to ensure a proper fit, coupling installation steps were rewritten to overcome potential ambient and system temperature variances to ensure proper fit, and added precautions to handling EPDM o-rings.

Evaluation

Tech Specs 3.2.3, 3.4.1, and 5.4 are affected by this procedure. Operations has the responsibility and the procedures for compliance with these Tech Specs, as this procedure is only used for system pump corrective maintenance. Maintenance will be performed on this pump only when these Tech Specs allow, per Operation's procedures. This retype will clarify and assure that maintenance activities will return the pumps to as-designed conditions and has been reviewed against approved vendor manuals, design documents, and station procedures to ensure the corrective maintenance controlled by this procedure will return the pump to as-designed condition. This also ensures compliance to the FSAR accident analysis.

MP/0/A/7150/57, RETYPE #7

Description

The purpose of this procedure is to provide guidance for Residual Heat Removal Pump Removal, Replacement and Corrective Maintenance. This retype provides additional guidance to install the pump impeller onto the shaft to ensure a proper clearance fit and to prevent galling between the shaft and impeller during installation.

Evaluation

Tech Specs 3.2.3, 3.4.1, and 5.4 are affected by this procedure. Operations has the responsibility and the procedures for compliance with these Tech Specs, as this procedure is only used for system pump corrective maintenance. Maintenance will be performed on this pump only when these Tech Specs allow, per Operation's procedures. This retype will clarify and assure that maintenance activities will return the pumps to as-designed conditions and has been reviewed against approved vendor manuals, design documents, and station procedures to ensure the corrective maintenance controlled by this procedure will return the pump to as-designed condition. This also ensures compliance to the FSAR accident analysis.

MP/1/A/7150/59, CHANGE #3

Description

The purpose of this procedure is to provide guidance for charging the Reciprocating Charging Pump Suction and Discharge Pulsation Dampers. This change provides more accurate charge pressure for changing temperatures.

Evaluation

The manufacturer recommended damper charge pressure changes depending on the damper's ambient temperature. This change allows for determining correct damper charge by using a new equation, $P'/T' = P''/T''$ (for a constant volume), where P' and T' are the recommended charge pressure at a specified temperature (70 degrees F). This change was also necessary since the suction damper was modified per NSM CN-11271. This procedure has been reviewed against approved vendor manuals, design documents, and station procedures to ensure the corrective maintenance controlled by this procedure will return the pump to as-designed condition. This also ensures compliance to the FSAR accident analysis.Also, changes implemented by NSM CN-11271 has been incorporated into this procedure.

MP/0/A/7150/73, CHANGE #7

Description

This procedure provides instructions to maintenance technicians who remove the steam generator primary manways for inspection and repair and provides steps which ensure that all removal and replacement activities are evaluated with respect to their effect on NC System vent path. This change deals specifically with hardware enhancements which facilitates the actual process of removing and installing the covers.

Evaluation

This procedure change does not change the design intent of the steam generators, nor does it change the ability of the steam generators to perform their design function, therefore the effect of this change is not significant relative to the FSAR, nor does it warrant inclusion into the FSAR. It also does not include tests or experiments not addressed in the FSAR.

MP/0/A/7150/93, RETYPE #1

Description

This procedure provides guidance to install/remove the secondary steam generator shell cover and associated wrapper plug, applicable to those of BWNS manufacturer. This safety evaluation does not attempt to justify the placement of any hole in the steam generator shell; rather, it specifically provides instructions for the installation/removal of a cover over a pre-existing hole.

Evaluation
Installation of the shell cover/wrapper plug ensures that no pressure boundary will be compromised on the steam generator. Worst case, there would be a 2.7" diameter hole in the shell, assuming a total failure of the cover. This could be considered a steam or feed line rupture, which both are bounded by the accident analysis in the FSAR. The shell covers used have been verified (through NSM process) to be in conformance with applicable ASME code requirements. No malfunctions fall outside of what has already been evaluated in the FSAR and no operating limits or assumptions made in any safety analysis have been violated.

MP/0/A/7150/97, RETYPE #1

Description
This procedure provides guidance for PM inspection of the Standby Make-up Pump pulsation dampers. This retype adds reference to PIR 0-C92-0812 and CNTC 1544-NV-P004-01 identifying minimum damper charge requirement, added steps to require verification of damper charge after a pump test if the damper is found below 90% charge during the pre-test damper charge verification, changed a step to require a damper recharge if the damper is found to be below 90% of the required charge, changed steps to use damper surface temperature, instead of room temperature.

Evaluation
This procedure was reviewed against approved vendor manuals, design documents, and station procedures to ensure activities controlled by this procedure will return the equipment to as-built condition, which will ensure compliance with FSAR accident analysis, will reduce the possibility of a malfunction, and does not involve an unreviewed safety question.

MP/0/A/7150/99, RETYPE #3

Description
This procedure provides guidance for Steam Generator Nozzle Dam Installation/Removal. The change involves adding steps for the removal procedure for cold leg dams to ensure doing so will not cause a loss of Residual Heat Removal capability during reduced inventory conditions, and to ensure that no more than one cold nozzle is removed at any one time.

Evaluation
This change does not alter the structure or function of the Steam Generator or the nozzle dams, does not cause the Steam Generators or the nozzle dams to be used in a method contrary to their design intent, does not warrant inclusion into the FSAR, nor does it involve tests or experiments not addressed in the FSAR.

MP/0/A/7150/101, Initial Issue

Description
This procedure was written to replace a similar Chemistry procedure for mixing sodium tetraborate ice solution

since Maintenance performs this function. Chemistry will continue to sample the ice solution water.

Evaluation
This procedure contains all of the requirements of the original Chemistry procedure, while minor revisions were made to make it more usable and clear. This procedure has been compared with Tech Specs and the FSAR to ensure that the actions controlled by this procedure will produce borated ice for use in the ice condenser that will meet all applicable requirements.

MP/0/A/7450/26, CHANGE #3

Description
This procedure provides guidance for Westinghouse 8000 Series Fans Corrective Maintenance. The change reflects recommendations from the manufacturer relative to belt deflection force.

Evaluation
Maintenance performed under this procedure has been reviewed against approved vendor manuals, design documents, and station procedures to ensure the corrective maintenance performed by this procedure returns the equipment to as-built condition. This ensure compliance with the FSAR accident analysis.

MP/0/A/7450/40, Initial Issue

Description
This procedure provides guidance for Control Room Chiller PMs.

Evaluation
Maintenance performed under this procedure has been reviewed against approved vendor manuals, design documents, and station procedures to ensure the corrective maintenance performed by this procedure returns the equipment to as-built condition. This ensure compliance with the FSAR accident analysis.

MP/0/A/7450/46, Initial Issue

Description
This procedure provides guidance for Control Room Compressor and Motor Assembly Corrective Maintenance.

Evaluation
Maintenance performed under this procedure has been reviewed against approved vendor manuals, design documents, and station procedures to ensure the corrective maintenance performed by this procedure returns the equipment to as-built condition. This ensure compliance with the FSAR accident analysis.

MP/0/A/7450/48, Initial Issue

Description
This procedure provides guidance for Temporary Alteration of Station Dampers.

Evaluation

Maintenance performed under this procedure has been reviewed against approved vendor manuals, design documents, and station procedures to ensure the corrective maintenance performed by this procedure returns the equipment to as-built condition. This ensure compliance with the FSAR accident analysis.

MP/0/A/7450/69, RETYPE #2

Description
This procedure provides guidance for maintenance and repair of Barber Coleman Actuators for Bahnson Service Company Administrative Field procedure number AFP-CNS-5.032, Rev. 2, dated 4/16/92.

Evaluation
This procedure has been compared with Tech Specs, the FSAR, and design documents to ensure that the actions it controls will comply with established Duke Power and station requirements to maintain plant equipment in its as-built condition, therefore the possibility of a malfunction will be reduced by this procedure.

MP/0/A/7600/08, RETYPE #6, and MP/0/A/7600/09, RETYPE #2

Description
This procedure provides guidance for corrective maintenance for Tufline 1,2,3,4, and 6" Plug Valves (MP/0/A/7600/08) and Tufline 1/2 and 3/4" Plug Valves (MP/0/A/7600/09). This retype results from OE-5817 which describes failures of Tufline Plug Valve cover fasteners which failed at Seabrook Unit 1. No similar failures have been reported at Catawba, however the procedure was changed to add a caution statement to inspect these fasteners for cracking and to determine any generic concerns.

Evaluation
This change does not increase the probability or consequences of a accident previously evaluated, nor does it create the possibility of accident than any already evaluated in the FSAR. This component will still function as originally designed and does not increase the possibility of an malfunction to equipment important to safety previously evaluated in the FSAR. The margin of safety defined in the bases of Tech Specs will not be reduced.

MP/0/A/7650/33, Initial Issue

Description
This procedure provides guidance for retubing the Reactor Coolant Drain Tank Heat Exchanger and provides technical direction to restore the heat exchanger to the original as-designed and constructed conditions. Manufacturer's drawings and specs were incorporated into this procedure.

Evaluation
Past tubing failures have resulted in exhausting the plugging margin of the heat exchanger. The entire tubing bundle is being replaced by this procedure, with design approved tubing material, however, the bundle is being restored to the original design drawing specs and conditions, therefore the retubing work does not require inclusion into the FSAR. This activity does not involve any procedures described in the FSAR. Implementation of this procedure does not change the intended design function or safety function of the heat exchanger, nor is the integrity of the Hx violated, but restored. No new failure or accident mode is created as a result of this procedure, nor are any changes to system parameters or operating sequences involved.

MP/0/A/7650/57, RETYPE #6

Description
This procedure provides guidance for Polar Crane Operation and Upper Containment Load Paths. This retype addresses movement of the polar crane during Modes 1 through 4.

Evaluation
One change to this procedure allows movement of the polar crane bridge over the Steam generator enclosures, but under no circumstances is the main block allowed to be moved over the Steam Generator enclosures during Modes 1 through 4. The Steam Generator enclosures are excluded from all safe load paths to be used during Modes 1 through 4, thus if the auxiliary block is used to carry a heavy load during Modes 1 through 4, it may not be moved over the enclosures. It is concluded as changed, the procedure will still forbid the transportation of any heavy load over the Steam Generator enclosures during Modes 1 through 4.

The other change ensures that both the operator of the polar crane and the associated flag person is qualified to use the crane as required, particularly for critical lifts. The protection afforded the Steam Generator enclosures/Steam Generators is not degraded the these changes. No other equipment is affected by this retype. There is no relaxation of operator/flag person qualification requirements, thus the probability of personnel error is not increased. No common mode failure is created. Neither any fission product barrier nor any source term evaluation is adversely affected. Neither any setpoint, design limit, or operating parameter is changed.

PT/1/A/4150/13B, CHANGE #31

Description
This procedure provides guidance for the Calorimetric Reactor Coolant Flow Measurement and the change allows cold leg spare temperatures to be used in the flow calculation per Westinghouse analysis.

Evaluation
Westinghouse has determined that the average of the cold leg active and spare RTD tempe atures for NC System flow determination are conservative based on data from Wolf Creek. This change does not affect equipment important to safety in any manner, the probability or consequences of an accident previously evaluated in the FSAR will not be increased, nor will the consequences of a malfunction of equipment important to safety previously evaluated in the FSAR will not be increased. No margin of safety is reduced.

PT/0/A/4150/17, CHANGE #3

Description
This procedure provides guidance for Total Core Unloading. This change revises the unload pattern to reflect the perimeter of core coupling of detector pattern, and ensures proper procedure adherence (human features change).

Evaluation
This new pattern enhances the effectiveness of the refueling/operation and protection of the fuel. Advantages include allowing a single core to be monitored by 3 excore detectors as late as possible in the unload process, increases opportunities for open water core movements, facilitates the control of drop lights and shoehorns. No safety features are jeopardized and no Tech Spec requirements are violated.

PT/2/A/4200/01A, RETYPE

Description
This procedure provides guidance for performing the Containment Integrated Leak Rate Test. This retype changes some test alignments for some penetrations due to post operation system alignment needs, allows ND to remain in operation for core cooling, and the structural integrity test is not performed, however, the test still conforms to the requirements of 10CFR50, Appendix J and the provisions of ANSI N45.4-1972 (Mass Point Method).

Evaluation
This test is essentially the same test as outlined in Chapter 14 of the FSAR. The alignments for this test satisfy the requirements for containment closure and containment integrity for fuel movement. This procedure has been compared with Tech Specs, the FSAR, and design documents to ensure that the actions it controls will comply with established Duke Power and station requirements to maintain plant equipment in its as-built condition, therefore the possibility of a malfunction will be reduced by this procedure.

PT/2/A/4200/09, RETYPE

Description
This procedure provides guidance for Engineered Safeguards Features testing. This retype adds response times for valves 2SA2 and 5 for use by the quarterly IWV test, ensures VC/YC equipment is shown in the correct load group, deletes RN pump discharge isolation valve and motor coolant inlet isolation valve response times since the pumps are initially running, changed electrical alignment so that the KC and RN pumps are running, changed sequence of steps to record auto-connected load prior to manually starting KF pumps and deleted KF pump and Hydrogen Recombiners for power calculation, changed electrical alignments to allow use of normal or alternate incoming feeders to 4160V essential SWGR, setup of process cabinets and SSPS for initiation of test moved from procedure to enclosures, added steps to verify 2ETA3(4) TRIP light on sequencer panel is ON to verify breakers receives a trip signal from load sequencer, deleted valve 2RN-291/351 since valves will not close due to minimum flow requirements of RN pumps, and deleted some jumpers for NW interlocks since the interlocks are met.

Evaluation
None of these changes increases the probability nor the consequences of an accident. The most significant change is to have the RN & KC pumps running prior to the test so that they may be load shed. This does not affect the systems significantly since the pumps would run after the actuation signal regardless of whether they are running prior to the test. They will be in their normal alignment. Pumps which receive a start signal are aligned to assure that a minimum flow path is available. The procedure requires immediate verification of flow upon actuation. Testing is performed in accordance with the FSAR and Tech Specs. The bases of Tech Specs were reviewed and the margin of safety is not reduced by this test.

PT/1/A/4200/09A, CHANGE #150

Description
This procedure provides guidance for Auxiliary Safeguards Test Cabinet Periodic Testing. This change allows an additional and less time consuming means for documenting quarterly IWV stroke times obtained from this test and added valves 1IASV-5080, 5160, 5400 and 5410 to be timed by this procedure for use for the quarterly IWV procedures (as opposed by timed individually by the quarterly IWV procedures).

Evaluation
This change essentially allows stroke time testing of certain valves during the Auxiliary Safeguards Test to be used in the quarterly IWV procedures to satisfy the quarterly test requirements of these valves when the Auxiliary Safeguards test is performed. This prevents unnecessary stroking/wear of the valves due to testing. It is purely a documentary change and does not affect test methods, or the safe operation of the unit.

PT/2/A/4200/09A, CHANGE #96

Description
This procedure provides guidance for Auxiliary Safeguards Test Cabinet Periodic Testing. This change allows an additional and less time consuming means for documenting quarterly IWV stroke times obtained from this test.

Evaluation
This change essenti[illegible]ows stroke time testing of certain valves during the Auxiliary Safeguards Test to be used in the quarterly IWV procedures to satisfy the quarterly test requirements of these valves when the Auxiliary Safeguards test is performed. This prevents unnecessary stroking/wear of the valves due to testing. It is purely a documentary change and does not affect test methods, or the safe operation of the unit.

PT/0/A/4200/13, CHANGE #10

Description
This procedure provides guidance for the stroke time testing of RN System Shared Valves. This change deleted the requirement to perform Independent Verification for the as-found/as-left position for these valves when testing and to delete notification of completion of this test to the SRO.

Evaluation
Independent Verification of these valve positions prior to and after testing is not required per OMP Section 1-5. These valves will go to their safe[illegible]osition upon receipt of a safety signal. The intent of the SRO sign-off for communicating completion of test[illegible]accomplished without the need for procedure sign-off. These changes do not affect test methods, or the safe o[illegible]ation of the unit.

PT/1/A/4200/13C, CHANGE #36 and PT/2/A/4200/13C, CHANGE #19

Description
This procedure provides guidance for stroke time testing of RN System valves. This change deleted the requirement to perform Independent Verification for the as-found/as-left position for these valves when testing and to delete notification of completion of this test to the SRO.

Evaluation
Independent Verification of these valve positions prior to and after testing is not required per OMP S[illegible]ion 1-5. These valves will go to their safety position upon receipt of a safety signal. The intent of the SRO sign-off for communicating completion of testing is accomplished without the need for procedure sign- changes do not affect test methods, or the safe operation of the unit.

PT/1&2/A/4250/[illegible]A, PT/1&2/4250/03B, and PT/1&2/A/4250/03C RETYPES

Description
This procedure provides guidance for IWP testing of the CA System Pumps for both units. The retypes removed the requirements for the CA CO2 System to be taken out of standby readiness during testing, added allowance to N/A steps requiring test valve line-up if system is already aligned to Standby Readiness, changed designation for Independent Verification from IV to DV for Double Verification, pump parameters being measured by test were altered to correspond to an acceptable flow band similar to that of the OPS monthly Head Verification Test, combined 2 former steps for removing test equipment into a single step with the option to perform this step out of sequence, re-ordered certain steps to a more logical sequence, added a caution statement to the Comp Measure enclosure to require the UST be isolated prior to establishing injection paths to the Steam Generators, and added an option to allow the use of either a 0-1800psig or 0-2000psig gauge for discharge pressure test instrumentation.

Evaluation
At least 2 CA System pumps are required operable if testing occurs during Modes 1,2,or 3. No changes to these procedures affect operability of the remaining 2 operable CA pumps. Since no new failure modes are introduced, all possible scenarios are bounded by existing accident analysis. These pumps will continue to be operated within the appropriate mechanical design limits. The removal of steps which take the CO2 System out of service will ensure sufficient fire protection remains available for all of the CA pumps during testing. These procedures have been compared with Tech Specs, the FSAR, and design documents to ensure that the actions they control will comply with established Duke Power and station requirements to maintain plant equipment in its as-built condition, therefore the possibility of a malfunction will be reduced by this procedure.

PT/1&2/4200/29, RETYPES

Description
This procedure provides guidance to stroke time test the SA System valves per the quarterly IWV requirements. These retypes add enclosures to allow the stroke time test to be initiated by manual starts of the CAPT when testing the pumps per the IWP procedure, allows use of a jumper with an in-line switch used to initiate stroking of valve, and designation for Independent Verification has been changed from IV to DV for double verification.

Evaluation
These changes serve to increase the effectiveness and availability of the CA System during testing of the SA System valves. The use of an in-line switch jumper will improve the accuracy of obtained stroke times and eliminate arching concerns across the links, and change from IV to DV conforms to the new requirements of IV per Site Directives. These procedures have been compared with Tech Specs, the FSAR, and design documents to ensure that the actions they control will comply with established Duke Power and station requirements to maintain plant equipment in its as-built condition, therefore the possibility of a malfunction will be reduced by this procedure.

PT/2/A/4350/15A

Description
PT/2/A/4350/15A is the diesel generator 2A periodic test procedure. This procedure change was made as a result of the implementation of modification CN-20528. This procedure change: 1) changed Catawba Electrical Elementary drawing numbers, 2) changed the section of the procedure which addresses non-essential trip bypass verification, and 3) changed the section of the procedure which addresses overspeed trip verification to reflect the relocation of the speed switch.

Evaluation
No unreviewed safety question was created as a result of this procedure change. Only diesel generator 2A is made inoperable by this test; 2B is still available if required. The diesel is run in a normal alignment, both paralleled to the grid and in an idling condition, by approved operating procedures. All accident analysis assumptions continue to be met.

PT/2/A/4350/15B

Description
PT/2/A/4350/15B is the diesel generator 2B periodic test procedure. This procedure change was made as a result of the implementation of modification CN-20528. This procedure change: 1) changed Catawba Electrical Elementary drawing numbers, 2) changed the section of the procedure which addresses non-essential trip bypass verification, and 3) changed the section of the procedure which addresses overspeed trip verification to reflect the relocation of the speed switch.

Evaluation
No unreviewed safety question was created as a result of this procedure change. Only diesel generator 2B is made inoperable by this test; 2A is still available if required. The diesel is run in a normal alignment, both paralleled to the grid and in an idling condition, by approved operating procedures. All accident analysis assumptions continue to be met.

PT/2/A/4400/01

Description
PT/2/A/4400/01 is the ECCS flow balance procedure. This procedure change was a complete rewrite of the subject procedure. The rewrite included both previously approved changes as well as new additional changes to enhance the procedure.

Evaluation
No unreviewed safety question was created as a result of this procedure rewrite. Performance of this procedure will continue to ensure that all technical specification surveillance requirements are satisfied for the ECCS and that the system will be able to meet its design safety function when required during accident conditions.

PT/2/A/4400/01

Description
PT/2/A/4400/01 is the ECCS flow balance procedure. This change allows for a portion of the procedure to be performed in Mode 6 by aligning the RHR pumps to take suction from the hot leg loops (B & C). Valves 2FW-27A and 2FW-55B are closed while valves 2ND-1B, 2ND-2A, 2ND-36B, and 2ND-37A are in their open position. The discharge path, cold leg injection lines, remains the same. Also, a page was added to perform comparisons of installed indications to control room and operator aid computer indications.

Evaluation
This test verifies the operability of ND pump 2A and at no time of this test will ND pump 2A be rendered non-functional nor will ND pump 2B be rendered inoperable. ND pump 2B is removed from service briefly to verify Technical Specification 4.5.2.h.3. While ND pump 2B is off, ND pump 2A is providing flow to the cold leg injection lines, thus ND flow to the cold legs is not interrupted and adequate core colling is maintained.

PT/2/A/4400/01

Description
PT/2/A/4400/01 is the ECCS flow balance procedure. This change allows for a portion of the procedure to be performed in Mode 5 and allows for D/P testing of valve 2ND-65B. This change adds a procedure enclosure which allows for D/P testing of valve 2ND-32A in Mode 5. Also, a page was added to perform comparisons of installed indications to control room and operator aid computer indications.

Evaluation
During the performance of the procedure, the procedure change ensures that one train of ND remains in service and isolated from the train being tested. The train being tested remains isolated from the NC system and is operated recirculating back to the FWST. Operation in these alignments does not create any unreviewed safety question.

PT/2/A/4400/03D

Description
PT/2/A/4400/03D is the component cooling system flow balance procedure for engineering safeguards and refueling. This change revised the procedure to allow its conduct with only the 2A2 pump. The acceptance criteria for the procedure was also revised to allow for throttling down on KC flow to the ND heat exchanger in order to maintain desired flows on all other essential header components. It has also been revised to meet only the acceptance criteria for those components required in Mode 6.

Evaluation
Specific limits to KC flow have been incorporated into the procedure to allow the 2A2 KC pump to supply its required loads without experiencing runout. In this configuration and decay heat load, substantial margin exists in the KC A train heat removal capability. The limits on ND heat exchanger flow are well below the limits prescribed in technical specification bases.

PT/0/A/4400/08A

Description
PT/0/A/4400/08A is the RN flow balance procedure for Train A. This procedure change reduced the minimum required RN flow from 5200 gpm nominal (5279 gpm error adjusted) to 4925 gpm nominal (5000 gpm error adjusted) for the one pump RN flow balance. Difficulty was encountered in achieving the previous flows so the ability of the RN system to perform its safety function was analyzed using the reduced flows so that the units could continue to operate until the cause of the degraded flows could be determined.

Evaluation
The RN system was shown to be capable of providing necessary cooling to all required plant equipment during an accident at the reduced flows. The change only changed the acceptance criteria for the test and not any test method or operating practices.

PT/0/A/4400/08A

Description
PT/0/A/4400/08A is the RN flow balance procedure for Train A. This procedure change allowed for the use of a second RN pump on Train 1A should a second pump be needed or desired.

Evaluation

Although the single pump balance is preferred, it is not beyond the design scope of the single failure analysis to use a second RN pump. Both pumps of the train receive a start signal from a loss of offsite power and/or a safety injection. Balancing the system with two pumps requires full operability of both pumps and their corresponding support flows to ensure train 1A is unconditionally operable. No unreviewed safety question existed as a result of this change.

PT/0/A/4450/04A

Description
PT/0/A/4450/04A is the auxiliary building filtered exhaust system performance test procedure. This restricted change deleted the minimum flow rate criteria and filter DP acceptance criteria designated for filter DP testing. Testing of 1A VA train on 5/1-2/92 did not require the minimum filter testing flow rates or filter DP, as the filter units were not being tested.

Evaluation
Although the required flow rate through the filter unit was not met, this flow rate is a test point designed to specify the most limiting flows and loads on the filter unit for testing and does not define a safety parameter. It does define the upper flow limit for the filter unit. The ability of the system to align to the ECCS pump rooms and appropriately heat and filter the air exhausted from these pump rooms was not affected, which is the only ESF function that VA performs. These ESF functions remained in the acceptance criteria and were successfully verified by testing. No credit is taken for VA in the FSAR Chapter 15 dose analysis.

PT/1/A/4200/09

Description
PT/1/A/4200/09 is the engineered safety features actuation periodic test procedure. The change allowed the ESF test to be performed prior to fill and vent of the NC system. The change established several NC level criteria to be used in the test. The level criteria ensure NC level remains above mid-loop and below the bend in the steam generator U-tubes. Also, power is removed from 1NI9A and 1NI10B to ensure no water is injected or gravity fed into the NC system.

Evaluation
The ESF test has been conducted in the past with NC filled and vented because only one train of ND is required with NC filled and vented. With the loops not filled, both trains of ND are required to be operable; however, technical specifications allow one ND loop to be inoperable for up to two hours for surveillance testing. The ND train under test was considered inoperable due to the discharge valve being closed during the test. If the train of ND under test were to have been needed, one additional operator action, opening the valve, would have been needed to return the train to operable status. The test was conducted with the same system lineups as in the past.

PT/1/A/4200/09

Description
PT/1/A/4200/09 is the engineered safety features actuation periodic test procedure. This change allowed the Train B blackout portion of the procedure to be performed with steam generators at low-low level. It also involved placing a jumper to allow 1SA-5 to remain closed with the low-low steam generator signal. This bypassed an SSF interlock which fails 1SA-5 open with 2/4 low-low level.

Evaluation
During the test, the steam generators are not used for heat removal and neither CA nor the SSF were required. If

CA were reset after the auto-start signal was present, the pump breaker could have been racked in without an auto-start. It would have required the low-low signal to clear and return to provide another auto-start. Reactor trip breakers were not closed for the test and therefore a reactor trip signal was not a concern.

PT/1/A/4200/09

Description
PT/1/A/4200/09 is the engineered safety features actuation periodic test procedure. The change added several enclosures to retest test components which were: 1) unavailable during the test, 2) did not time out during the test, or 3) failed response time during the test (degraded bus voltage time delay).

Evaluation
The only retests which could significantly affect any systems are those for 1RN484A, 1NI9A, 1NI10B, and the retest for the degraded bus voltage time delay. The test for 1RN484A had steps to ensure YV was shut down and that NC pumps were off. The tests for 1NI9A and 1NI10B ensured that the NV pumps were off prior to opening the valves. This ensured that water would not be injected into the NC system when the valves were opened. The retest of the degraded bus voltage time delay called for the diesel generator to be started and run by the normal operating procedures. Once the D/G was paralleled by these procedures, the normal incoming breaker was tripped. The D/G continued to supply the loads on 1ETA. The D/G was then paralleled and shut down. The essential bus was energized at all times. If for any reason the 1A essential bus were to have been lost, 1ETB was unaffected by this test and D/G 1B was available to power it if necessary.

PT/0/A/4450/08

Description
PT/0/A/4450/08 is the control area ventilation system performance test procedure. This change constituted a rewrite of the entire VC test procedure. It incorporated twelve previously approved changes.

Evaluation
No unreviewed safety question existed as a result of this procedure rewrite. The VC system remains fully operable during the test and is not operated outside of its design conditions. Sections of the procedure that require test instrumentation to be installed have removal steps to ensure no instrumentation is left connected to the system. The train of VC being tested remains operable throughout the test and the other train is not affected.

PT/0/A/4450/15A

Description
PT/0/A/4450/15A is the air moisture periodic test procedure for the VI system. This evaluation was performed to determine if any unreviewed safety question was involved with the performance of this procedure.

Evaluation
Precautions were included in the procedure to notify the control room operators of alarms that could be actuated during the test. Some valves were opened slightly but VI system pressure was not affected. Only a small amount of air was taken from the system during the test. This did not change the system in a significant manner. The only function performed was the taking of air from the system and measurement of dewpoint.

PT/0/A/4600/26

Description

PT/0/A/4600/26 is the NC temperature calibration procedure. This 10CFR50.59 evaluation was performed in conjunction with the original issue of this procedure. The purpose of this procedure is to calculate full power delta temperature for each NC loop and recalibrate as necessary, to check NC loop revised Thot average weighting scheme, and to determine overtemperature delta T setpoint channel check criteria and revise as necessary.

Evaluation
The procedure ensures that the full power delta T used in the overpower and overtemperature delta T setpoints is accurate. Assumptions used in calculations have negligible or conservative effects on results. The probability and consequences of an accident or equipment malfunction were not increased. The margin to safety was maintained.

PT/2/A/4700/12

Description
PT/2/A/4700/12 is the standby shutdown facility (SSF) control panel functional verification procedure. This 10CFR50.59 evaluation was performed in conjunction with the original issue of this procedure. This procedure is used to verify a position or actually open/close or stop/start a number of SSF components.

Evaluation
All sections of this procedure are performed in a mode of operation where the components being tested, or used in conjunction with the test, are not required to be operable. Additional section requirements specify other conditions necessary to be met or verified that ensure no plant systems or equipment will be jeopardized by the performance of the test. Limits and precautions have been incorporated into the procedure that allow the test to be terminated and equipment returned to a safe functional condition should problems arise during execution of the procedure. Communication is maintained between personnel in the control room, the SSF, and other remote locations during the test. Prior to transferring control to the SSF, procedure steps require a final review of equipment affected by the transfer and possible effects upon current plant conditions. This review ensures that items such as containment closure, ND pump suction alignments, etc., are maintained in a condition applicable to existing plant configuration requirements.

PT/2/B/4600/07

Description
PT/2/B/4600/07 is the loose parts monitor spectrum comparison procedure. This procedure incorporated a number of changes, including change of purpose, addition of references, change of acceptance criteria, rewrite of procedure steps, and modifications to procedure enclosures.

Evaluation
The method of calibration employed in the procedure was discussed with the vendor that provides support for the vibration and loose parts monitoring system. The vendor agreed that this method of calibration is sufficient and meets the requirements of the system. The loose parts monitoring system is not a safety related system. It is not required for mitigation of any accidents described in the FSAR. The only requirement on the system is that it does not degrade physically during a design basis seismic event and affect the operation of any safety related equipment near it. This procedure reissue does not affect the function or physical hardware of the system in any way and does not cause the response of the system to a design basis seismic event to be any different than before.

TN/0/A/0435/00/02A and 03A

Description

These two TNs are procedures for the implementation of NSM CN-50435, Rev. 0, work units #2 and #3, respectively. This NSM replaced sixteen nuclear service water (RN) system BIF carbon steel butterfly valves with Fisher stainless steel butterfly valves. The carbon steel valve bodies have experienced significant corrosion, the rubber seats have hardened, and the epoxy seat retainers have failed. Work unit #2 governed the replacement of valves 1RN53B, 1RN58B, 1&2RN848B, and 1&2RN849B. Work unit #3 governed the replacement of valves 1RN54A, 1RN63A, 1RN57A, 1RN843B, 1&2RN846A and 1&2RN847A.

Evaluation
Implementation of this NSM did not create any new failure modes. Adequate reviews were conducted to assure that the SSCs that were assumed to be operable remained operable. Implementation of this NSM could not have made the RN system an accident initiating system. Implementation of this NSM did not degrade the operable train of RN for either train A or B valve replacement evolutions. The site was capable of responding to any design basis accident combination. Implementation of this NSM did not affect the fuel, cladding, reactor coolant pressure boundary, or containment. No assumptions made in any accident analysis were affected by this NSM. The RN system's ultimate heat sink safety function was not degraded outside the bounds of the existing technical specifications and accident analysis.

TN/1/A/1280/00/01A and 02A

Description
These two TNs are procedures for the implementation of NSM CN-11280, Rev.0, work units 01 and 02, respectively. This NSM revised the logic for the CF and SM isolation indicating lights. This modification will allow indication by an automatic initiation as well as a manual initiation. Previously, isolation indication was received only by manual initiation.

Evaluation
The implementation of this procedure took place during a unit outage period and the work was train related. The installation activities in this procedure were performed when the equipment affected by this modification was not required for safe operation of the unit, which was modes 5, 6, and no mode. The electrical isolations were restored and a post operability review was performed prior to entering mode 4. The modification test plan was completed prior to mode 2.

TN/1/A/1281/00/03A

Description
TN/1/A/1281/00/03A is the procedure for implementation of NSM CN-11281, Rev. 0, work unit 03. This procedure was written to control the following activities: 1) pull four new cables, 2) install cable supports to accommodate cable pulling, 3) mount terminal boxes 1TBOX0627 and 1TBOX0628, and 4) install/wire new cables assigned to these terminal boxes.

Evaluation
Implementation of this procedure had no significant effect on any operating system. All firestops opened during cable pulling activities were resealed by applicable steps specified in the procedure. Electrical tie-ins for circuitry installed in were performed during implementation of procedures TN/1/A/1281/00/05A and TN/1/A/1281/00/06A. This procedure had no effect on the bases of technical specifications. Also, there was no significant effect on the FSAR.

TN/1/A/1281/00/04A

Description
TN/1/A/1281/00/04A is the procedure for implementation of NSM CN-11281, Rev. 0, work unit 04. This procedure replaced the existing capillary instrumentation with a GEMS Delaval float type continuous level sensing system. This procedure governed the following activities: 1) install five new level transmitters for train A, 2) install five new level transmitters for train B, 3) pull new cables to accomodate wiring of new transmitters, and 4) wire new transmitters and electrical penetrations.

Evaluation
This procedure did not interrupt any energized circuit or make any wiring tie-ins to existing circuits or systems. All firestops opened during implementation of this procedure in order to complete cable pulling activities were closed by this procedure. The primary purpose of this modification was to improve the availability and reliability of the containment water level sensing instrumentation. The new transmitters are QA condition 1 and were mounted per seismic qualifications. Compliance with seismic criteria was not degraded and the new instrumentation is qualified for operation in a post accident environment. No changes made by this procedure adversely affected the ability of any system to perform its design function.

TN/1/A/1281/00/05A and 06A

Description
TN/1/A/1281/00/05A & 06A are the procedures for implementation of NSM CN-11281, Rev. 0, work units 05 and 06, respectively. These procedures provided guidance for the implementation of train B and train A work, respectively and governed the following activities: 1) remove existing transmitter and related hardware and wiring, 2) replace scale on receiver gauge located on main control board, 3) remove components, remove and replace fuses, and perform wiring tie-ins for train B and train A circuitry, 4) calibrate level transmitters, and 5) conduct leak rate test on penetrations.

Evaluation
The changes made by these procedures did not adversely affect the ability of any other system to perform its design function. The new level instrumentation installed by these procedures is powered from Class 1E busses and mounted per seismic qualifications. The level transmitters are connected to a receiver gauge to a single output. A power supply was removed from existing circuitry, so the loads on affected power supplies will remain within design limits. The main purpose of this modification is to improve the availability and reliability of the containment water level sensing instrumentation. These procedures did not adversely affect any safety limits, setpoints, or operating parameters, so the margin of safety was not reduced.

TN/1/A/1320/00/01A and 02A

Description
TN/1/A/1320/00/01A and 02A are the procedures for implementation of NSM CN-11320, Rev. 0, work units 01 and 02, respectively. These procedures provided instruction to replace the relays which detect degraded voltage conditions on the 1ETA and 1ETB busses, respectively (EPC system). The existing ITE 27H relays were replaced with more accurate ITE 27N relays. The installation of these relays will decrease the possibility of unnecessary actuations of the degraded voltage protection and provide a greater degree of protection for safety related equipment under degraded voltage conditions.

Evaluation
The implementation of these procedures involved replacement of the three existing ITE 27H relays in 1EATC16 and 1EATC17 with ITE 27N relays. Circuit paths and functions were not affected. This modification was installed during the 1A and 1B diesel maintenance windows, with Unit 1 in modes 5, 6, or no mode. With the 1A

or 1B diesel inoperable, the isolation of these relays had no effect on plant conditions or operating status. The activities detailed in these procedures were done when the equipment affected by this modification was not required for safe operation of the unit. There was no negative effect on any safety related system or component, nor was there an increase in the consequences of any accident as evaluated in the FSAR. The installation of the modification did not reduce the margin of safety as defined in the basis of any technical specification. These procedures did not create any unreviewed safety question.

TN/1/A/3727/CE/01A and 02A

Description
TN/1/A/3727/CE/01A and 02A are the procedures for implementation of Exempt Change CE-3727, work units 01 and 02, respectively. These procedures added relays as input buffers for valves 1RN3A and 1RN36A against electrical noise in the cable runs to the nuclear service water intake structure. Induced voltages caused by the length of the surrounding cables were resulting in false signals to the OAC, control room panel lights, and 1.47 Bypass Panel.

Evaluation
Although loss of manual control from Unit 1 of valves 1RN3A and 1RN36A was a result of these procedures, automatic control of the valves through both units and manual control of the valves through Unit 2 remained, thus ensuring operability of the valves at all times. The valves were cycled as functional verification tests. Internal wiring changes within 1EATC9 resulted in temporary loss of control of opening valve 1RN63A. In order for this loss of control not to affect the safe shutdown of the plant, the RN system was switched to the SNSWP.

TN/1/B/1245/00/01A

Description
TN/1/B/1245/00/01A is the procedure for implementation of NSM CN-11245, Rev. 0, work unit 01. This procedure provided instruction for reassigning the automatic and manual functions of steam generator water sample monitor 1EMF34 to condenser air ejection exhaust monitor 1EMF33. This procedure also provided instruction for deleting the steam generator blowdown sample heat exchanger 1A, 1B, 1C, and 1D flow transmitters 1NMFT5460 and 1NMFT5480 along with their associated transducers 1NMFE5460, 1NMFE5470, 1NMFE5480 and 1NMFE5490.

Evaluation
The implementation of this procedure involved removing 1EMF34 from service. Technical Specification 3.3.3.10 requires that this monitor be operable at all times; however, 1EMF34 was unable to meet its operability requirements and was listed in the TSAIL. The completion of this procedure cleared one of several TSAIL items that allowed 1EMF34 to be removed from the TSAIL. The changes to 1EMF33 did not require this monitor to be removed from service; therefore, Technical Specification 3.3.3.11, which states that 1EMF33 must be operable in Modes 1, 2, 3, and 4, was not entered.

TN/2/A/0046/MM/01A and 02A

Description
TN/2/A/0046/MM/01A and 02A are the procedures for implementation of minor modification CE-60046, Rev. 0, work units 01 and 02, respectively. This modification modified control circuit wiring for valves 2RN028A (work unit 01) and 2RN038B (work unit 02). These wiring changes were used to provide independent fusing between the main control room indication and the motor operator valve starter controls for each RN discharge valve.

Evaluation
These changes will result in meeting proper power separation requirements in the event a control room problem may cause a fuse to blow and eliminate power to the RN pump switchgear control interlock used to provide automatic opening of the discharge valve upon starting of the pump. A post modification test was conducted following the work. No unreviewed safety question was determined to exist.

TN/2/A/0300/00/02A and 03A

Description
TN/2/A/0300/00/02A and 03A are the procedures for the implementation of NSM CN-20300, work units 02 and 03, respectively. This NSM relocated the volumetrics pneumatic module and remote control unit outside the personnel air lock and bypass leakage enclosure to an auxiliary building location. This equipment was relocated in order to reduce personnel exposure resulting from testing and maintenance activities and to improve equipment reliability. Work units 02 and 03 pertain to the upper and lower personnel airlocks, respectively.

Evaluation
No work associated with these procedures started until Unit 2 was in no mode when the upper and lower PALs and containment isolation valves were not required to be operable. No system was prevented from performing any function important to safety while this work was being performed. Post modification testing activities were identified in these procedures to verify that the modified system functions as designed.

TN/2/A/0397/00/01A and 02A

Description
TN/2/A/0397/00/01A and 02A are procedures for the implementation of NSM CN-20397, Rev. 0, work units 01 and 02, respectively. This NSM provided independent 1E power sources for both train A and train B related hydraulic isolator alarm inputs to RVLIS. These inputs were previously powered from the same source. Work unit 01 governed the installation of cable supports and pulling of new cables required for this NSM. Work unit 02 governed the wiring required to implement the modification.

Evaluation
During cable pulling, the cables being pulled were not terminated by the procedure. Firestops opened during the pulling of the cables were resealed. Wiring changes were implemented in a mode with the RVLIS system not required and out of service. Wiring was completed prior to NC system fill and vent. No unreviewed safety question was generated as a result of the implementation of these procedures.

TN/2/A/0528/00/04A and 05A

Description
TN/2/A/0528/00/04A and 05A are the procedures for implementation of NSM CN-20528, work units 04 and 05, respectively. This NSM replaced the existing pneumatic devices that provide the non-safety related diesel generator trips with electronic components. It also replaced solenoids used for pneumatic logic control in the diesel engine control panel with electronic devices. A pneumatic operated shutdown solenoid was replaced with an electrically operated solenoid. Work units 04 and 05 governed the work for diesel generator 2A and 2B, respectively.

Evaluation
These procedures were performed with Unit 2 in modes 5, 6, or no mode. Work required for these procedures was performed when the diesel generators were inoperable due to maintenance and Unit 2 was aligned in

accordance with Technical Specification 3.8.1.2. This NSM affected only non-safety related diesel generator trips. Safety related trips were not affected. This NSM did not change the existing control logic for the diesel generators.

TN/2/A/0602/00/01A

Description
TN/2/A/0602/00/01A is the procedure for implementation of NSM CN-20602, Rev. 0 (installation of atmospheric vent to reactor vessel head), work unit 01. Previously, the draining of the NC system following unit shutdown required the opening of reactor head vent isolation valves. Since these valves have proven to be unreliable, in order to verify proper draining of the reactor vessel head, the reactor vessel level indication system (RVLIS) was employed. The use of the RVLIS path to verify and subsequently aid in draindown was determined unacceptable and a dedicated vent path was determined to be required. This NSM installed a reactor head vent to aid in draindown.

Evaluation
Piping attached to the reactor vessel head is QA 1, Class A. During implementation of this procedure, Unit 2 remained in mode 6 or no mode. Reactor vessel integrity was assured to be restored by NDE testing of all welds and hydrostatic testing of installed piping.

TN/2/A/0638/00/01A

Description
TN/2/A/0638/00/01A is the procedure for implementation of NSM CN-20638, Rev. 0, work unit 01. This procedure provided instruction for replacing the existing AirPax overspeed monitor for the Unit 2 auxiliary feedwater turbine driven pump (CAPT). The AirPax monitor was replaced with a Dynalco SST 2400 speed switch, along with a Dynalco SDC 2000 power supply converter to provide the necessary power input. In addition, several new loop numbers were provided for various CAPT monitoring functions.

Evaluation
The new monitor and its power supply are qualified for use in the CA system as QA Condition 1 devices. This procedure was completed during modes 5, 6, or no mode, with the CAPT out of service. Implementation of this procedure did not result in an unreviewed safety question.

TN/2/A/0647/00/01A and 02A

Description
TN/2/A/0647/00/01A and 02A are the procedures for implementation of NSM CN-20647, Rev. 0, work units 1A and 2A, respectively. This modification isolated the NR system (boron thermal regeneration) and made it inoperable. The NR system was not used by Operations to control boron level for several years. This modification deleted power and control circuitry, as well as instrument air, from the NR system. Work unit 1A implemented the non-outage portion of the modification, while work unit 2A implemented the outage portion.

Evaluation
All components affected by electrical and instrumentation isolation for these procedures were evaluated and determined to have no adverse effects on the operation of the plant. No unreviewed safety question was created as a result of the implementation of these procedures.

TN/2/A/0664/00/01A through 22A

Description
TN/2/A/0664/00/01A through 22A are the procedures for implementation of NSM CN-20664, Rev. 0, work units 01 through 22, respectively. This NSM modified control circuit wiring on a number of valves to provide "limit actuated" torque switch bypass contacts which can be adjusted independently of indications or interlocks and provided data to complete MOV testing of the valves. The MOV testing information included in the NSM superseded the old torque switch setting values and replaced them with thrust values. The settings were selected, set, and will be maintained correctly to accommodate the maximum differential pressure expected on the valves during both normal and abnormal events within the design bases. The new thrust values ensure the valves will operate during normal and abnormal events by setting limitations on total thrust, delta p thrust, and packing load.

Work units 01 through 22 are applicable to the following valves, respectively:

2FW001A (refueling water loop isolation valve)
2FW032B (refueling water loop isolation valve)
2KC050A (train 2A supply to auxiliary building non-essential header isolation valve)
2KC053B (train 2B supply to auxiliary building non-essential header isolation valve)
2ND032A (ND train 2A hot leg injection isolation valve)
2ND065B (ND train 2B hot leg injection isolation valve)
2NI054A (safety injection system accumulator 2A discharge isolation valve)
2NI065B (safety injection system accumulator 2B discharge isolation valve)
2NI076A (safety injection system accumulator 2C discharge isolation valve)
2NI088B (safety injection system accumulator 2D discharge isolation valve)
2RN404B (upper containment vent units supply containment isolation valve)
2WL867A (liquid waste recycle system vent unit condensate drain tank containment isolation inside valve)
2WL869B (liquid waste recycle system vent unit condensate drain tank containment isolation outside valve)
2RN144A (NS heat exchanger A inlet isolation valve)
2RN148A (NS heat exchanger A outlet isolation valve)
2RN225B (NS heat exchanger B inlet isolation valve)
2RN229B (NS heat exchanger B outlet isolation valve)
2RN287A (KC heat exchanger A inlet isolation valve)
2RN347B (KC heat exchanger B inlet isolation valve)
2RN437B (lower containment vent units supply containment isolation outside valve)
2RN484A (lower containment vent units return containment isolation inside valve)
2RN487B (lower containment vent units return containment isolation outside valve)

Evaluation
During the implementation of all work units above, prior to returning the respective valve to service, a functional verification was performed to verify valve operability. No unreviewed safety question was generated as a result of the implementation of the work units described.

TN/2/A/0676/00/03A

Description
TN/2/A/0676/00/03A is the procedure for implementation of NSM CN-20676, Rev. 0, work unit 03. This NSM replaced the existing Barton filled capillary system used to monitor containment sump level with GEMS float type level instrumentation. This procedure installed cable supports, pulled cables, and installed terminal boxes and associated wiring required for this NSM.

Evaluation
All firestops opened during cable pulling activities were resealed by applicable steps specified in this procedure. Implementation of this procedure had no significant effect on any operating system. No unreviewed safety question was caused by the implementation of this procedure.

PT/2/A/4200/13H

Description
PT/2/A/4200/13H is the NI and NV check valve movement test procedure. This change constituted a rewrite of the procedure. The major change to the procedure was the development of new acceptance criteria.

Evaluation
No unreviewed safety question was generated as a result of this procedure change. This procedure is performed in no-mode conditions with the reactor vessel open. ECCS systems are not required during the performance of this procedure. This test ensures that technical specification surveillance requirements are satisfied for the ECCS and that the system will be able to meet its design safety function when required during accident conditions.

PT/2/A/4350/02E

Description
PT/2/A/4350/02E is the CA, CF, and turbine interlocks periodic test. This change constituted a procedure retype that incorporated a number of changes. These included the following:

- Added standing work request number for IAE support
- Added an engineered safety features actuation periodic test as a prerequisite test
- Added option to enclosure for CAPT #2 autostart on train blackout signal to allow response time to be calculated using previously obtained response times
- Added steps to the motor-driven CA pump autostart sections to require motor-breaker for the pump being tested to be racked in-open as a prerequisite
- Added steps to all sections with specific SSPS requirements to ensure control room SRO is notified when certain SSPS conditions are no longer required by this procedure
- Added steps to CF isolation and CA pump autostart sections to ensure that an inadvertent main turbine trip does not occur upon initiation of a loss of both CFPT signal
- Deleted steps associated with opening CFP discharge valves and verifying they close on a CF isolation on hi-hi doghouse level
- Implemented changes associated with valve alignments for eacg main turbine trip section
- Changed designation for Independent Verification from IV to DV (Double Verification)
- Added various caution statements and notes, as well as made terminology changes
- Altered order which links are restored in AMSAC section
- Added substeps to AMSAC section to require CA pump autostart defeat to be instated after resetting CA
- Added enclosure to be completed as a prerequisite to both CF isolation sections which will identify problems with CF isolation valves prior to beginning either CF isolation section

Evaluation
No changes associated with this retype require any equipment to be operated outside its normal design limits. The CAPT autostarts are the only system responses tested during a mode which they are required. During these sections, the required number of motor-driven CA pumps remain available. No unreviewed safety question was generated as a result of this procedure retype.

PT/1/A/4200/13E

Description
PT/1/A/4200/13E is the CA valve inservice test procedure. This change increased the allowed stroke time of valves 1CA149, 1CA150, 1CA151, and 1CA152 from </= 5 seconds to </= 10 seconds. This ensures that the stroke time requirement for these valves is consistent with those given in technical specifications.

Evaluation
Since the stroke time requirements of the subject valves are being updated to ensure consistency with technical specifications, the new stroke times remain within the limits established by the design basis analysis. No safety margin is reduced as a result of this procedure change.

PT/2/A/4200/13E

Description
PT/2/A/4200/13E is the CA valve inservice test procedure. This change increased the allowed stroke time of valves 2CA185, 2CA186, 2CA187, and 2CA188 from </= 5 seconds to </= 10 seconds. This ensures that the stroke time requirement for these valves is consistent with those given in technical specifications.

Evaluation
Since the stroke time requirements of the subject valves are being updated to ensure consistency with technical specifications, the new stroke times remain within the limits established by the design basis analysis. No safety margin is reduced as a result of this procedure change.

PT/2/A/4200/13K

Description
PT/2/A/4200/13K is the CA valve inservice test procedure. This change increased the allowed stroke time of valves 2CA149, 2CA150, 2CA151, and 2CA152 from </= 5 seconds to </= 10 seconds. This ensures that the stroke time requirement for these valves is consistent with those given in technical specifications.

Evaluation
Since the stroke time requirements of the subject valves are being updated to ensure consistency with technical specifications, the new stroke times remain within the limits established by the design basis analysis. No safety margin is reduced as a result of this procedure change.

PT/1/A/4200/13E

Description
PT/1/A/4200/13E is the CA valve inservice test procedure. This change increased the allowed stroke time of valves 1CA185, 1CA186, 1CA187, and 1CA188 from </= 5 seconds to </= 10 seconds. This ensures that the stroke time requirement for these valves is consistent with those given in technical specifications.

Evaluation
Since the stroke time requirements of the subject valves are being updated to ensure consistency with technical specifications, the new stroke times remain within the limits established by the design basis analysis. No safety margin is reduced as a result of this procedure change.

kevin

TN/2/A/0676/00/04A

Description
This procedure implements Train A work for NSM CN-20676. The purpose of this modification is to improve the availability and reliability of the Containment Water Level sensing instrumentation. This procedure provides guidance for the removal of an existing transmitter and associated hardware, and the rewiring and calibration of several level transmitters.

Evaluation
Implementation of this procedure does not adversely affect the ability of any other system to perform its design function. This modification improves the availability and reliability of the Containment Water Level sensing instrumentation. All loads on affected power supplies remain within design limits. This procedure does not adversely affect any safety limits, setpoints, or operating parameters. As a result, the margin of safety as defined in the bases of the Technical Specifications is not reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/2/A/0676/00/05A

Description
This procedure implements Train B work for NSM CN-20676. The purpose of this modification is to improve the availability and reliability of the Containment Water Level sensing instrumentation. This procedure provides guidance for the removal of an existing transmitter and associated hardware, and the rewiring and calibration of several level transmitters.

Evaluation
Implementation of this procedure does not adversely affect the ability of any other system to perform its design function. This modification improves the availability and reliability of the Containment Water Level sensing instrumentation. All loads on affected power supplies remain within design limits. This procedure does not adversely affect any safety limits, setpoints, or operating parameters. As a result, the margin of safety as defined in the bases of the Technical Specifications is not reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/2/A/0676/00/06A

Description
This procedure provides guidance for the implementation of NSM-20676. This procedure replaces the existing capillary instrumentation with a GEMS Delaval float type continuous level sensing system and installs 10 new level transmitters and associated wiring.

Evaluation
This modification improves the availability and reliability of the Containment Water Level sensing instrumentation. This procedure does not interrupt any energized circuit or make any wiring tie-ins to existing circuits or systems. The new transmitters being installed are QA Condition 1 and are be mounted per seismic qualifications. The new instrumentation is qualified for operation in a post accident environment. No changes

made by this procedure adversely affect the ability of any system to perform its design function. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/2/A/1320/00/01A

Description
This procedure provides instructions to replace the existing relays which detect degraded voltage conditions on the Unit 2 EPC bus with high accuracy ITE 27N relays in the Train A control circuits. These changes are being implemented under NSM-21320.

Evaluation
The installation of these relays decrease the possibility of unnecessary actuations of the degraded voltage protection and provide a greater degree of protection for safety related equipment under degraded voltage conditions. Circuit paths and functions are not affected by this replacement. The isolation of these relays occurred when the 2A Diesel Generator was inoperable and had no effect on plant conditions or operating status. There is no negative affect on any safety related system or component. The installation of the modification does not reduce the margin of safety as defined in the basis of any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/2/A/1320/00/02A

Description
This procedure provides instructions to replace the existing relays which detect degraded voltage conditions on the Unit 2 EPC bus with high accuracy ITE 27N relays in the Train B control circuits. These changes are being implemented under NSM-21320.

Evaluation
The installation of these relays decrease the possibility of unnecessary actuations of the degraded voltage protection and provide a greater degree of protection for safety related equipment under degraded voltage conditions. Circuit paths and functions are not affected by this replacement. The isolation of these relays occurred when the 2B Diesel Generator was inoperable and had no effect on plant conditions or operating status. There are no negative affect on any safety related system or component. The installation of the modification does not reduce the margin of safety as defined in the basis of any technical specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/2/A/3588/CE/01A

Description
This procedure provides instructions to remove the doghouse level interlocks to the Main Feedwater Pump Discharge Isolation Valves 2CF-10 and 2CF-17. These changes are being implemented under exempt change CE-3588.

Evaluation
Deleting the signals from these valves helps prevent unnecessary wear that could cause premature failures and increased maintenance on these valves and their actuators and reduce the severity of feedwater system transients caused by a high-high doghouse level signal. This work occurred on Unit 2 during Mode 5,6 and No Mode. All

components affected by electrical isolations for this procedure were evaluated and determined to have no impact on the safe operation of Unit 2 in Modes 5, 6, and No Mode. Appropriate testing was performed after implementation of this modification to ensure proper operation of equipment prior to the required modes of operation. This change does not create a reduction in the margin of safety as defined in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/2/B/0635/00/01A

Description
This procedure provides instruction for reassigning the automatic and manual functions of Steam Generator Water Sample Monitor 2EMF34 to Condenser Air Ejection Exhaust Monitor 2EMF33. These changes are being implemented under NSM CN-20635.

Evaluation
The requirements for EMF-34 were removed from the Technical Specifications (T/S) and placed in the Selected Licensee Commitments (SLCs) under T/S Amendments 103/97. A subsequent SLC change deleted the requirement for EMF-34. This procedure does not require the removal of EMF-33 from service and does not affect its ability to perform its intended functions. EMF-33 is fully capable of performing the additional actions previously assigned to EMF-34. This change does not create a reduction in the margin of safety as defined in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/A/0078/00/01A

Description
This procedure installs a Train A "sequencer signal control circuit" switch on the main control board, deletes Train A VC/YC temperature switches and associated annunciators, and downgrades the Train A Chilled Water Pump differential pressure switch from safety to non-safety. These changes are being implemented under NSM CN-50078.

Evaluation
The implementation of these changes improve the reliability of the VC/YC Systems, simplify maintenance, and reduce the possibility of radiation exposure. Work on Train A of VC/YC was performed when the system was properly removed from service in accordance with the Technical Specifications. All equipment affected by this procedure and the design intent of this modification were completely tested. Implementation of these changes do not create a reduction in the margin of safety as defined in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/A/0078/00/02A

Description
This procedure installs a Train B "sequencer signal control circuit" switch on the main control board, deletes Train B VC/YC temperature switches and associated annunciators, and downgrades the Train B Chilled Water Pump differential pressure switch from safety to non-safety. These changes are being implemented under NSM CN-50078.

Evaluation
The implementation of these changes improve the reliability of the VC/YC Systems, simplify maintenance, and reduce the possibility of radiation exposure. Work on Train B of VC/YC was performed when the system was properly removed from service in accordance with the Technical Specifications. All equipment affected by this procedure and the design intent of this modification were completely tested. Implementation of these changes do not create a reduction in the margin of safety as defined in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/A/0078/00/03A

Description
This procedure removes VC/YC temperature switches and the annunciators/indications associated with these switches and rewires the pressure switch associated with the Control Room Area Chilled Water Pump Motor as a non-safety instrument. These changes are being implemented under NSM CN-50078.

Evaluation
This procedure does not affect systems or components addressed in the FSAR in a significant manner. This procedure deletes equipment that has already been removed from service under a separate procedure and makes wiring revisions in the A Train Switchgear Room AHU control circuitry. All equipment affected by this procedure and the design intent of this modification were completely tested. Implementation of these changes do not create a reduction in the margin of safety as defined in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/A/0078/00/04A

Description
This procedure removes VC/YC temperature switches and the annunciators/indications associated with these switches and rewires the pressure switch associated with the Control Room Area Chilled Water Pump Motor as a non-safety instrument. These changes are being implemented under NSM CN-50078.

Evaluation
This procedure does not affect systems or components addressed in the FSAR in a significant manner. This procedure deletes equipment that has already been removed from service under a separate procedure and makes wiring revisions in the B Train Switchgear Room AHU control circuitry. All equipment affected by this procedure and the design intent of this modification were completely tested. Implementation of these changes do not create a reduction in the margin of safety as defined in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/B/0403/00/01A

Description
This procedure modifies the plant Public Address System to allow paging capability from the emergency coordinators desk in the TSC to several locations within the plant. These changes are being implemented under NSM CN-50403.

Evaluation

All wiring modifications specified by this NSM are non-safety. Equipment mounted per this NSM is non-safety and does not require a seismic analysis, as installation is not within buildings required for safety related functions. Any wall penetrations opened during cable pulling activities were sealed prior to completion of this procedure. These changes do not affect any safety related equipment and do not the reduce the margin of safety in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/B/0437/00/01A

Description
This procedure replaces the carbon vane sample pump/motor on radiation monitor 1EMF-35/36/37 with a diaphragm sample pump/motor. This pump/motor is being replaced due to the rapid wear of the carbon vanes which are currently installed. This change is being implemented under NSM CN-50437.

Evaluation
This change improves the ability of this sample pump to perform its intended function. No fire boundaries were breached during implementation of this modification. All applicable Technical Specification action statements were followed when this system was removed from service. All components affected by electrical isolations were evaluated and it was determined that this activity had no effect on the safe operation of Unit 1. This change does not reduce the margin of safety in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/B/0437/00/02A

Description
This procedure replaces the carbon vane sample pump/motor on radiation monitor 2EMF-38/39/40 with a diaphragm sample pump/motor. This pump/motor is being replaced due to the rapid wear of the carbon vanes which are currently installed. This change is being implemented under NSM CN-50437.

Evaluation
This change improves the ability of this sample pump to perform its intended function. No fire boundaries were breached during implementation of this modification. All applicable Technical Specification action statements were followed when this system was removed from service. All components affected by electrical isolations were evaluated and it was determined that this activity had no effect on the safe operation of Unit 2. This change does not reduce the margin of safety in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/B/0437/00/03A

Description
This procedure replaces the carbon vane sample pump/motor on radiation monitor 1EMF-38/39/40 with a diaphragm sample pump/motor. This pump/motor is being replaced due to the rapid wear of the carbon vanes which are currently installed. This change is being implemented under NSM CN-50437.

Evaluation
This change improves the ability of this sample pump to perform its intended function. No fire boundaries were

breached during implementation of this modification. All applicable Technical Specification action statements were followed when this system was removed from service. All components affected by electrical isolations were evaluated and it was determined that this activity had no effect on the safe operation of Unit 1. This change does not reduce the margin of safety in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/B/0437/04A

Description
This procedure replaces the carbon vane sample pump/motor on radiation monitor 2EMF-35/36/37 with a diaphragm sample pump/motor. This pump/motor is being replaced due to the rapid wear of the carbon vanes which are currently installed. This change is being implemented under NSM CN-50437.

Evaluation
This change improves the ability of this sample pump to perform its intended function. No fire boundaries were breached during implementation of this modification. All applicable Technical Specification action statements were followed when this system was removed from service. All components affected by electrical isolations were evaluated and it was determined that this activity had no effect on the safe operation of Unit 2. This change does not reduce the margin of safety in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/B/0437/00/05A

Description
This procedure replaces the carbon vane sample pump/motor on radiation monitor EMF-43A with a diaphragm sample pump/motor. This pump/motor is being replaced due to the rapid wear of the carbon vanes which are currently installed. This change is being implemented under NSM CN-50437.

Evaluation
This change improves the ability of this sample pump to perform its intended function. No fire boundaries were breached during implementation of this modification. All applicable Technical Specification action statements were followed when this system was removed from service. All components affected by electrical isolations were evaluated and it was determined that this activity had no effect on the safe operation of the station. This change does not reduce the margin of safety in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/B/0437/00/06A

Description
This procedure replaces the carbon vane sample pump/motor on radiation monitor 1EMF-42 with a diaphragm sample pump/motor. This pump/motor is being replaced due to the rapid wear of the carbon vanes which are currently installed. This change is being implemented under NSM CN-50437.

Evaluation
This change improves the ability of this sample pump to perform its intended function. No fire boundaries were breached during implementation of this modification. All applicable Technical Specification action statements

were followed when this system was removed from service. All components affected by electrical isolations were evaluated and it was determined that this activity had no effect on the safe operation of Unit 1. This change does not reduce the margin of safety in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/B/0437/00/07A

Description
This procedure replaces the carbon vane sample pump/motor on radiation monitor EMF-43B with a diaphragm sample pump/motor. This pump/motor is being replaced due to the rapid wear of the carbon vanes which are currently installed. This change is being implemented under NSM CN-50437.

Evaluation
This change improves the ability of this sample pump to perform its intended function. No fire boundaries were breached during implementation of this modification. All applicable Technical Specification action statements were followed when this system was removed from service. All components affected by electrical isolations were evaluated and it was determined that this activity had no effect on the safe operation of the station. This change does not reduce the margin of safety in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TN/5/B/0437/00/08A

Description
This procedure replaces the carbon vane sample pump/motor on radiation monitor 2EMF-42 with a diaphragm sample pump/motor. This pump/motor is being replaced due to the rapid wear of the carbon vanes which are currently installed. This change is being implemented under NSM CN-50437.

Evaluation
This change improves the ability of this sample pump to perform its intended function. No fire boundaries were breached during implementation of this modification. All applicable Technical Specification action statements were followed when this system was removed from service. All components affected by electrical isolations were evaluated and it was determined that this activity had no effect on the safe operation of Unit 2. This change does not reduce the margin of safety in any Technical Specification. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TT/0/A/9100/58

Description
This test procedure verifies that all A Train circuits modified under NSM CN-50078 have been properly wired. This test procedure has three parts. Part one verifies the non-selected train LOCA signal. Part two starts the modified train with the key switch in the control room and verifies the proper operation of selected equipment. Part three verifies the selected train LOCA signal.

Evaluation
The probability of an accident, either previously evaluated or different, is not increased by this procedure since the VC/YC System is not an accident initiator and the system is not operated outside of its design conditions. The

consequences of an accident, either previously evaluated or different is not increased since the VC/YC System remains fully operable during the test and it is not operated outside of its design conditions. Steps in the procedure that install jumpers or slide links have double verifications to ensure that the modifications are removed or placed in the normal operating alignment. Since both trains of VC/YC remain fully operable throughout this test, the margin of safety as defined in the bases of the Technical Specifications is not reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TT/0/A/9100/58, Change #3

Description
This test procedure change verifies that all B Train circuits modified under NSM CN-50078 have been properly wired. This test procedure has three parts. Part one verifies the non-selected train LOCA signal. Part two starts the modified train with the key switch in the control room and verifies the proper operation of selected equipment. Part three verifies the selected train LOCA signal.

Evaluation
The probability of an accident, either previously evaluated or different, is not increased by this procedure since the VC/YC System is not an accident initiator and the system is not operated outside of its design conditions. The consequences of an accident, either previously evaluated or different is not increased since the VC/YC System remains fully operable during the test and it is not operated outside of its design conditions. Steps in the procedure that install jumpers or slide links have double verifications to ensure that the modifications are removed or placed in the normal operating alignment. Since both trains of VC/YC remain fully operable throughout this test, the margin of safety as defined in the bases of the Technical Specifications is not reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TT/0/A/9100/60

Description
This test procedure verifies that the Auxiliary Building Ventilation (VA) System is capable of meeting its design functions under two abnormal alignments - one with the unfiltered exhaust fans operating and another with the supply units operating. This test was written to respond to PIP #0-C93-0160.

Evaluation
The probability of an accident, either previously evaluated or different, is not increased by this procedure since the VA System is not an accident initiator and modifying its operation as described in this test procedure does not make it an accident initiator. This procedure provides adequate guidance to ensure the VA System is placed in its safety alignment upon receipt of a safety injection signal on either unit. With the VA System in its safety alignment, control room pressurization is maintained and offsite and control room operator doses are kept below 10CFR100 limits. This test does not adversely affect the safety related portions of the VA System. The margin of safety as defined in the bases for any Technical Specification is not be reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TT/1/A/4450/18

Description
This procedure tests the 1A Diesel Generator Building Ventilation fans by reversing the positions of the outside

air intake and the inside air recirculation dampers from their normal alignments. This test is performed to collect temperature data for application to operability evaluations.

Evaluation
Diesel building room temperature is monitored on a regular basis throughout this test to ensure no operability concern associated with low temperature occurs. The circuits that control Emergency Diesel Generator Ventilation operation during a Diesel generator start are not altered. All equipment that is manipulated is non-safety and close surveillance is in place to monitor the effects of the modification. The margin of safety as defined in the bases for any Technical Specification is not be reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TT/1/A/4450/18, Change #1

Description
This procedure change tests the 1B Diesel Generator Building Ventilation fans by reversing the positions of the outside air intake and the inside air recirculation dampers from their normal alignments. This test is performed to collect temperature data for application to operability evaluations.

Evaluation
Diesel building room temperature is monitored on a regular basis throughout this test to ensure no operability concern associated with low temperature occurs. The circuits that control Emergency Diesel Generator Ventilation operation during a Diesel generator start are not altered. All equipment that is manipulated is non-safety and close surveillance is in place to monitor the effects of the modification. The margin of safety as defined in the bases for any Technical Specification is not be reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TT/2/A/9200/69

Description
This procedure was written as a retest for exempt change CE-2487. This modification wired the normally closed contact on relay "GC" in the trip circuit of 2ETA2 and 2ETB2 in parallel with the manual trip switch. The contacts are now in series with the sequencer actuation contacts. This modification was done to ensure that a "relay race" does not prevent 2ETA(B)2 from closing on a blackout if the set of contacts in the trip circuit show 2FTA(B)1 is open.
Evaluation
Breaker 2ETA(B)2 is racked to the test position during the test. The 4160VAC Blackout Bus is energized through 2GTA(B) during this test and is not required to mitigate any accident. The Unit 2 sequencer is in the test mode during this test. This prevents the actuation of VC/YC on a Unit 1 sequencer actuation, and prevents the starting of RN Pump 2A on a Unit 1 sequencer actuation or a Low Pit Level swapover to the Standby Nuclear Service Water Pond (SNSWP). Appropriate action statements are entered as a result of these equipment inoperabilities. In the event of a Unit 2 4160VAC essential bus blackout or LOCA, the sequencer automatically comes out of the test mode. The margin of safety as defined in the bases for any Technical Specification is not be reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TT/2/A/9200/070

Description
This procedure implements a one-time test to evaluate the practicability of drawing a vacuum in the 2D steam generator. This test is needed for the planned cleaning of the Unit 2 steam generators during the Unit 2 End-of-Cycle 6 refueling outage. The only physical interfaces with the plant's piping systems are the connection of the following: 1) a vacuum hose to 2D BW Pump suction line drain, 2) a vacuum hose to the 2D MSIV inlet drain, and 3) a cooling water hose to a YM connection. Water discharged by the pump enters a doghouse floor drain and is routed to the WL System.

Evaluation
The physical connections given above do not affect any structure system or component currently addressed in the Technical Specifications or the FSAR. All instrument loops that are exposed to a vacuum were reviewed and those that cannot withstand a vacuum are isolated. This test is performed during No-Mode. No secondary side heat sink or steam generator component is required to perform any safety function in this condition. All steam generator components are operated in accordance with design limits and general operating procedures. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TT/1/A/9200/072

Description
This procedure provides guidance on determining the minimum pick up voltage for the motor starter coil on 1RN-57A to ensure that the valve closes under a degraded bus voltage condition. This valve is inoperable during this test and requires the Nuclear Service Water (RN) System to be removed from its normal system alignment.

Evaluation
This test requires the RN System to be aligned to the Standby Nuclear Service Water Pond (SNSWP). All Technical Specification requirements for the RN System are met during this test. Maximum voltage is not exceeded and no other components in the valve circuit is affected. System functions as described in the FSAR are not affected. No operating parameters, safety limits, or setpoints are being changed. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

TT/2/A/9200/73

Description
This procedure is used to set up and record various 4160VAC essential pump motor and emergency diesel generator parameters to validate the Catawba computer model (CYME). This program is used to update the computer simulation for auxiliary power systems response to system transients, transfers, operational low voltages, and fault conditions. The test involves a test run of the Diesel Generator on an isolated bus with subsequent manual loading with essential equipment.

Evaluation
The Unit 2 B Train emergency diesel generator is inoperable for this test and the appropriate Technical Specification Action Statements are followed. The Diesel generator is operated in accordance with applicable operating procedures. System functions as described in the FSAR are not affected. No operating parameters, safety limits, or setpoints are being changed. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this procedure does not represent an unreviewed

safety question.

TT/2/A/9200/74

Description
This procedure operates the 2B Diesel Generator on an isolated bus and then provides several step load increases and decreases so that data can be obtained to validate computer code models of CNS Diesel Generator loads.

Evaluation
All pumps are being operated in either their normal operating alignment or in a test alignment which is used in other tests such as IWP tests. Starting the pumps while the Diesel Generator is on an isolated bus is no different than the loading the D/G sees during a sequencer actuation. The pumps and the D/G are operated in a configuration which are common to other procedures. This test has no effect on the ability of the 2A D/G to supply essential power to train A should the 2B D/G be unable to supply its loads. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this procedure does not represent an unreviewed safety question.

SUMMARY OF NUCLEAR STATION MODIFICATION-RELATED 10 CFR 50.59 EVALUATIONS

Note: The first number designates the unit on which the modification was performed (i.e. CN-1#### indicates Unit 1, CN-2#### indicates Unit 2, CN-5#### indicates that it is shared for both units).

CN-10632

Description

Rerouting the ice condenser floor cooling supply lines to provide the ice condenser floor with colder glycol than it presently receives. This mod is attempting to reduce the temperature difference that exists between the air temperature in the lower part of the ice condenser and the average ice bed temperature. This temperature difference induces air circulation which in turn increases the rate of ice sublimation.

Evaluation

These modifications will have no impact on the consequences of accidents since the equipment being modified does no serve to mitigate directly the consequence of any accident and since the ice condenser ability to function is not adversely affected. The probability of any accident is not increased since no system is adversely affected and since the system being modified cannot serve to initiate an accident. The probability and consequence of any malfunction of equipment important to safety or any accident previously evaluated in the SAR will not be increased, since the floor cooling system is not related to safety and since no system is adversely affected by these modifications. This mod will not create the possibility of a new accident or new malfunction of equipment important to safety because the revision to the floor cooling system was designed to the appropriate design considerations as the current floor cooling system. No setpoints or safety limits are affected. In addition, reduction in the glycol temperature to the floor cooling will not affect any of the margin of safety defined in the Tech Specs, therefore the margin of safety will not be reduced. There are no unreviewed safety questions.

CN - 10758

Description

Upgrade the existing recirculation filtering system that services the diesel generator engine fuel oil storage tanks. This upgraded filtration system will be a vendor supplied unit comprised of a clay polisher with a filter on its upstream and downstream side and a high capacity pump. This package will connect to the existing flanged suction and discharge piping of the presently installed recirculation pump. All instrumentation, controls, isolation and bypass valves and test line connections will be included. The existing recirculation filter will be removed and replaced with a capped piping T and used as the new addition point for adding required chemicals to the stored fuel oil.

Evaluation

The mod is located in the yard and is non-safety related. The modified portion of the system is isolated from the safety related portion by Class C normally closed valves and check valves. The new pump is shutdown by the safety related redundant interlocks. The new system will function more efficiently and provide cleaner oil to the Diesel Generator Engine so there is no increase in the probability of a malfunction of equipment important to safety evaluated in the SAR. The mod will not adversely affect any safety related system or increase the probability of an accident evaluated in the SAR. There is no increase in the consequences of an accident or of a malfunction of equipment important to the safety evaluated in the SAR. No safety parameters or design limits have been adversely affected, no margin of safety as defined in the bases to a Tech Specs is reduced. There are no unreviewed safety questions associated with this NSM.

CN-10976

Description
To facilitate normal maintenance and emergency operations which may be required in the doghouse, this mod will add normal AC, emergency AC and emergency DC general area lighting and AC receptacles to the inboard doghouse.

Evaluation
This mod conforms to FSAR section which describes the plant lighting systems including failure analysis. Although the emergency lighting and transformers may be connected to Class 1E 600 V motor control centers, they are not required to be safety grade. The additional electrical load created by the additional lighting falls within the design capacity. Cable separation requirements will be met. Approved techniques are used and no additional seismic analysis is required. No fire barriers penetrations are necessary. The doghouse lighting is not an accident initiator. It does not affect any safety related equipment adversely or increase the probability of an accident or cause an unanalyzed accident. There is no increase in the probability or the consequences of a malfunction of equipment important to safety evaluated in the SAR. This mod does not create a possibility of a malfunction different from any in the SAR. There is no affect to the consequences of an analyzed accident. No setpoints, design limits or operating parameters are affected. There are no unreviewed safety questions.

CN - 10980

Description
Replace the turbine supervisory instrumentation (TSI) which is considered to be unreliable and inaccurate with more reliable and accurate systems. Main Control Board (MCB) chart records are affected, and one modification to the trip system for each turbine occurs.

Evaluation
A single failure does not adversely affect the availability of this trip function. A seismic review of the main control board has been completed. Interfaces between the TSI and the turbine trip systems are being upgraded to improve their reliability and will minimize the possibility of an unnecessary trip No other accident initiators are affected. There is no affect on any of the Chapter 15 analysis. There will be no affect on the consequences of an analyzed accident. No fission product barriers or source term evaluations are affected. A failure will not create an accident which has not been considered in the FSAR. There will be no increase in the probability of a malfunction of equipment important to safety previously evaluated in the FSAR. The margin of safety as defined n the basis to any Tech Spec will not be reduced. No setpoints, design limits or operating parameters affecting reactor safety are affected by this mod. There are no unreviewed safety questions.

CN - 11064

Description The Borg Warner solid wedge gate air operated valves (1SM86, 1SM87, 1SM88, 1SM89, 1SM155, 1SM161, 1SM164, 1HA6, 1HA7, and 1HA8) will be replaced by Anchor Darling double disc air operated gate valves. The double disc design is less susceptible to thermal binding; the replacement valves will be more reliable in opening. They also will require less maintenance.

Evaluation
No system used for accident mitigation is affected by the modifications. The SG relief and safety valve lines are larger than the drain lines. The consequences of the inadvertent opening of a SG relief or safety valve is an upper bound to the consequences of a failure of any of the valves to be modified. Seismic qualification of the valves and piping are not adversely affected. The controls for the valves will not be modified. There will be no adverse

affect on the performance characteristics of the valves in response to their automatic controls. Instrument air requirements for the valves are not affected. The material and design specifications of the valve to be modified are not degraded by the modifications. The loads associated with normal operation are not adversely affected. No systems will be adversely affected. Thus, the mod will not increase the probability of an accident. The modifications will not create the possibility of an accident of a different type than any evaluated in the SAR. The mod will not increase either the probability or the consequences of a malfunction of equipment important to safety evaluated in the SAR. The mod will not create the possibility of a malfunction of a different type than any evaluate. No fission product barrier or source term evaluation is adversely affected. No setpoint, design limit, nor any operating parameter is adversely affected. The mod will not reduce the margin of safety as defined in the basis of any tech spec. There are no unreviewed safety questions.

CN -11162

Description Valve 1NV291 will be replaced with a bolted bonnet gate valve. The new valve will be easier to maintain and can be repaired with spare parts which are readily available. The replacement valve will be manually operated and will have a stem leakoff line.

Evaluation Valve 1NV291 is a manually operated valve which is either fully open or fully closed (normal). The velocity coefficient of the replacement valve is greater than the current. Thus, the flow rate through the alternate seal water injection will not be degraded. The replacement of a globe valve with a gate valve is not expected to have any adverse affect on the performance of the NV system. The replacement valve is materially compatible with the interfacing piping. Piping stress analysis has been satisfactorily performed to qualify the affected NV line segments for seismic and other loads. The interface with the RHT will not be affected by this modification. The alternate seal water injection flow path will not be adversely affected by the mod. The normal seal water injection flow path will not be affected. Neither the volume control nor the chemistry control performed by NV will be adversely affected. The leakoff path will not be changed. No other accident initiators are affected. Thus, the modification will not increase the probability of an accident evaluated in the FSAR. No new failure modes were identified to be associated with the mod. Therefore, the mod will not create the possibility of an accident different from any evaluated in the FSAR. The NV flow paths and components used for emergency core cooling are not adversely affected by the mod. The replacement valve is QA 1 and will comply with the same design specifications and environmental and seismic criteria as the valve to be replaced. No other equipment important to safety is affected by the mod. Thus the mod will be increase the provability of a malfunction of equipment important to safety evaluated with the FSAR. The mod will not increase the consequences of a malfunction of equipment important to safety evaluated in the FSAR. Neither any fission product barrier nor any source term evaluation will be affected by the mod. The mod will not increase the consequences of an accident evaluated in the FSAR. Neither any setpoint, design limit, nor any operating parameter is affected by the mod. The mod will not reduce the margin of safety as defined in the basis any technical specifications. There are no unreviewed safety questions associated with the mod.

CN - 11196

Description The addition of manual three-way valves in addition to flow sight glasses currently used to visually identify drain leakage from NV system filters, pumps, and heat exchangers. The three-way valves will allow the normal (drain) flow path to be redirected as necessary to measure unidentified leakage. Use of these valves will eliminate frequent and time consuming disassembly of the flow sight glasses in order to measure leakage from the various NV System components. The same model sight glasses will replace the old.

Evaluation The changes are to Class E drain lines in the system. The system will function as before to monitor unidentified Reactor Coolant leakage. The three way valves are manually operated and will only be used to

quantify unidentified leakage. The leakage rates will not be affected and no new failure modes have been identified. Therefore, the probability or consequences of an accident evaluated in the SAR are not increased. Since leakage rates will not increase and monitoring capabilities still exist as before, equipment operation will be unaffected. Based on this , the probability or consequences of a malfunction of equipment important to safety evaluated in the SAR are not increased. Likewise, since no new failure modes were identified, unidentified leakage can more easily be measured, and the system will function as before, the possibility for an accident or a malfunction of a different type than any evaluated in the SAR is not created. Since no safety parameters or design limits have been adversely affected, no margin of safety as defined in the bases to any Technical Specification is reduced. There are no unreviewed safety questions associated with this NSM.

CN - 11220

Description This modification will provide a method for injecting Boric Acid into the CM system during power operation. The Boric Acid must be injected to mitigate the caustic attack on the Unit 1 Steam Generator Tubes. A portable boric acid batching skid, including a chemical mixing tank, has been located in the Turbine Building basement which will be utilized to batch boric acid for injection to the hotwell. Connections at the hotwell were installed by a previous modification. This will (1) provide permanent power for the skid (2) provide demineralized water, YM, to the Boric Acid skid for batching purposes (3) provide a catwalk to allow chemical additions to the Boric Acid Addition Skid.

Evaluation No undesirable interactions are possible due to the addition of the catwalk. The tie-in to the YM system is not nuclear safety significant as well as the tie-in to the CM system. The power source is a non-safety source and will not affect any Class 1E electrical equipment. There are no Appendix R concerns. The loads on the affected power supply remains within design specs. A full technical evaluation was performed for this subject including (1) summary of industry experience with boric acid, (2) changes required to the secondary chemistry program, (3) impact on materials compatibility, (4) impact on plant discharge characteristics (5) impact on chemical additional system use. This NSM does not involve any SSCs that are evaluated in the FSAR. All affected components are non-safety rated. The effectiveness of SSCs important to safety will not be degraded due to any design events such as an earthquake because no SSCs important to safety can be degraded due to failure of the affected components.

SUMMARY OF NUCLEAR EXEMPT CHANGES RELATED TO 10 CFR 50.59 EVALUATONS

CE-2487

Description

This modification wires the normally closed contact on relay "GC" in the trip circuit of 1(2)ETA2 and 1(2)ETB2 in parallel with the manual trip switch. The contacts are now in series with the sequencer actuation contacts. This modification was done to ensure that a "relay race" does not prevent 1(2)ETA(B)2 from closing on a blackout if the set of contacts in the trip circuit show 1(2)FTA(B)1 is open.

Evaluation

The interlock between the EPC-ETB feeder breakers and the EPC alternate incoming breakers are not adversely affected by the modifications. No interface between either the EPC or ETB switchgear and any other system is adversely affected. Compliance with neither Appendix R nor separation criteria are degraded. No new failure modes were identified. The seismic qualification of the EPC and ETB switchgear is not affected. Neither any setpoint, design limit, nor any operating parameter is affected. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-2581

Description

This modification makes an editorial revision to the I&C list to reflect the as built condition of valves CN0WGCV3380 and CN0WGSV3380. The I&C list does not reflect the proper item number for these valves.

Evaluation

This modification makes an editorial change to the I&C list to reflect the as-built condition of the station. This change does not affect the operation or design of the station. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-2583

Description

This modification makes an editorial revision to the I&C list to reflect the as built condition of CN0WGTH5600 and CN0WGTH5610. The I&C list does not reflect the proper manufacturer of these instruments.

Evaluation

This modification makes an editorial change to the I&C list to reflect the as-built condition of the station. This change does not affect the operation or design of the station. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-2795

Description

This modification replaces the Unit 1 CAPT governor with a new governor with an acceleration speed control containing a 14 second speed setting bushing. In addition, the manufacturer's documentation is being updated to reflect the new characteristics of the governor.

Evaluation

No new failure modes were identified as a result of this modification. No action in the safety analysis is degraded as a result of this modification. The performance of the CA Turbine Driven Pump (CATDP) during any design basis events are not adversely affected by this modification. There is no increase in the probability of a CA Pump Turbine overspeed as a result of this modification. This modification does not affect any other system, structure, or component important to safety. No setpoint or design limit is changed as a result of this modification. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3044

Description

This modification replaces the mechanical seal on the Unit 1 and 2 Containment Spray (NS) Pumps with a mechanical seal of a new design. This new seal is easier to install, reduces the possibility of leakage, and is more reliable.

Evaluation

The ability of the NS System to perform its intended function is not affected by the installation of the new mechanical seal. The seal is designed to operate at the temperature and pressure conditions experienced in this portion of the NS System. The new seal results in better sealing capability and more efficient seal installation. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3098

Description

This modification provided an access hole in the 1D S/G Main Steam (SM) System piping to perform a radiographic inspection of weld 1SM39-07. After the inspection, the hole was plugged.

Evaluation

The function or operability of the SM System is not affected. The access hole plug is designed to function at the temperature and pressure conditions in this portion of the SM System and is seal welded. The plug maintains the integrity of the SM System and serves as a pressure boundary. To satisfy seismic concerns, a minimum clearance of 0.75" is maintained between the top of the plug and the inside wall of the guard pipe. The access hole and plug do not create any piping stress concerns. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3358

Description

This modification deletes valves 1NI-011, 1NI-013, and 1NI-196 and the associated test line piping between the 1" test header and the 3" header from the centrifugal charging pumps to the Reactor Coolant System cold legs. This modification also deletes the associated electrical wiring and equipment.

Evaluation

The function or operability of the NI System is not affected by the deletion of this test line. This test line serves no useful function since the check valves in the header from the centrifugal charging pumps to the cold legs do not require any type of testing. This test line was cut and a pipe cap was installed in accordance with the appropriate piping specification. Per Engineering evaluation, deleting this test line does not create any piping stress or support problems. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3347

Description

This modification replaces the existing one piece piston ring with a two piece wedge style piston ring in condenser dump valves (CDVs) 1SB-009, 1SB-018, and 1SB-027. The associated spacer is also replaced with a spacer designed to be compatible with the new piston ring.

Evaluation

The CDVs are non-safety related and do not perform any safety function. The function or operability of the SB System is not affected by the new wedge style piston ring and associated spacer. The new piston ring and spacer are designed to function at the temperature and pressure conditions experienced in this portion of the SB System. The CDVs do not interface with any plant system used for accident mitigation. No new failure modes were found to be created by this modification. Neither any setpoint, design limit, nor operating parameter is affected. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3433

Description

This modification replaces ASCO NP831655E solenoid valves 2VPSV0010, 0020, 0030, 0040, 0060, 0070, 0080, 0090, 0100, 0110, 0120, 0130, 0150, 0160, 0170, 0180, 0190, and 0200 with ASCO NP8316A55E solenoid valves.

Evaluation

The NP831655E solenoid valve exceeds Duke Power Company's external leakage requirement of 10 scc/hr. The NP8316A55E solenoid valve is a modified version of the NP831655E in that it has a bleed orifice in the body of the valve instead of in the diaphragm and the diaphragms are assembled with locktight to eliminate air intrusion between the fabric and the ethylene propylene lamination of the diaphragm. The new solenoid valves were subjected to a hydrostatic pressure of 1300 psi and no leakage was detected. The new solenoid valves are qualified under the same test report as the old solenoid valves. The manufacturer states that the new solenoid valves have the same fit, form, function and material as the old. This change does not affect the operation of the VP System. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3467

Description
This modification revises CNM-1205.00-1997 to include appropriate design required information for verifying actuator torque switch settings for MOVs 2FW-033A, 2FW-049B, 2KC-C37A, 2KC-C40B, 2ND-059B, and 2NV-477 per the requirements of NRC Generic Letter 89-10. In addition, this modification replaces the spring packs on 2FW-033A and 2FW-049B with spring packs that are sized for their application.

Evaluation
This modification does not affect any present signals that initiate valve motion. Valve operator speed and capacity is unaffected. Open and closure times of these valves are not changed and are determined by a stroke time retest in accordance with Technical Specification 4.0.5. This modification does not affect the valves ability to perform their design function in an accident. No safety related function of these valves is added or deleted. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3506

Description
This modification deletes the loop and seal bend associated with instrument loop 1SA5020. This tubing is associated with the Auxiliary Feedwater Pump Turbine (CAPT) speed control. The problem associated with this tubing was identified during CA System Audit SITA-90-02(CN).

Evaluation
The function or operability of the SA System is not affected by this modification. The old tubing configuration was evaluated by Engineering and determined to be unnecessary and needing modification. The new tubing configuration conform to the installation specifications for a solenoid valve vent. The function of the CAPT speed control circuit is not affected. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3540

Description
This modification revises CNM-1205.00-1997 to include appropriate design required information for verifying actuator torque switch settings for various MOVs in the Unit 1 Auxiliary Feedwater (CA) System, Refueling Water (FW) System, Component Cooling Water (KC) System, Reactor Coolant (NC) System, Residual Heat Removal (ND) System, Safety Injection (NI) System, Containment Spray (NS) System, Chemical Volume and Control (NV) System, Nuclear Service Water (RN) System, Breathing Air (VB) System, and the Instrument Air (VI) System per the requirements of NRC Generic Letter 89-10. In addition, this modification replaces the spring pack and torque limiter plate for 1NC-031B, 1NC-033A, 1NC-035B and the motors on MOVs 1NS-012B, 1NS-015B, 1NS-029A, and 1NS-032A with a 16NA1 motor.
Evaluation
This modification does not affect any present signals that initiate valve motion. Valve operator speed and capacity is unaffected. Open and closure times of these valves are not changed. This modification does not affect the valves ability to perform their design function in an accident. No safety related function of these valves is added or deleted. The new spring pack allows these MOVs to meet their required closing thrust. The 16NA1 motor has

the same physical dimensions as the existing motor (14NAX2) and therefore, no seismic concerns exist. The new motors have higher current rating than the old and require larger O/L heaters to be installed in breakers 1EMXJ-F02D, 1EMXJ-F02C, 1EMXA-R07A, and 1EMXA-R06A. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3541

Description
This modification revises CNM-1205.00-1997 001 to include appropriate design required information for verifying actuator torque switch settings for various MOVs in the Unit 2 Steam Generator Blowdown (BB) System, Refueling Water (FW) System, Component Cooling Water (KC) System, Safety Injection (NI) System, Containment Spray (NS) System, Chemical Volume and Control (NV) System, Nuclear Service Water (RN) System, and the Main Steam (SM) System per the requirements of NRC Generic Letter 89-10. In addition, this modification replaces the motors on MOVs 1NI-100B, 2NS-012B, and 2NS-015B with a 16NA1 motor. A correction to a wiring discrepancy on CN-2730-02.01 for MOV 2FW-027A is also included.

Evaluation
This modification does not affect any present signals that initiate valve motion. Valve operator speed and capacity is unaffected. Open and closure times of these valves are not changed. This modification does not affect the valves ability to perform their design function in an accident. No safety related function of these valves is added or deleted. The 16NA1 motor has the same physical dimensions as the existing motor (14NAX2) and therefore, no seismic concerns exist. The new motors have higher current rating than the old and require larger O/L heaters to be installed in breakers 2EMXJ-R08B, 2EMXJ-F02D, and 2EMXJ-F02C. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3594

Description
This modification revises the hardware and software for the Unit 1 Digital Turbine Control System. Specific changes include the following. Replace the system's MFCs with newer MFPs along with some minor wiring changes to meet the power requirements of the MFPs. Revise the logic to allow Control Valve Movement testing to be performed at 92% Reactor Power instead of 88%. Modify the Load Drop Anticipator (LDA) logic such that the inputs are processed by the overspeed processor only. Modify the logic for the first out indication for mechanical overspeed. Add an interlock to the systems logic such that above 60% load (as sensed by stage pressure), a main turbine trip will not occur on high exhaust hood temperature. Add a 2 second time delay to the Low LH Pressure Turbine Trip logic. Delete the lag block in the stage pressure logic. Modify the Control Valve Test Logic to allow proper testing of Control Valve #4.

Evaluation
The Digital Turbine Control System is non-safety and the above modifications were performed during the Unit 1 End-Of-Cycle (EOC) 6 refueling outage. The turbine control system was retested by simulated inputs and by existing station overspeed and startup procedures. The changes implemented by this modification do not affect any reactor trips associated with the main turbine. These changes provide better control of the Turbine and equal or better protection for the turbine and its components. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an

unreviewed safety question.

CE-3630

Description
This modification replaced BAN type fuses in the Essential Motor Control Center secondary CPT circuits with BAF type fuses and revised affected drawings. In addition, the secondary fuse numbering on specific CNBMs was revised and vendor manual CNM-1314.01-0140-001 has been added as a drawing reference to all the Essential Motor Control Center One-Line Lists.

Evaluation
This change is used to partially resolve Notice Of Violation 413, 414/92-01-01. The deletion of BAN fuse types from the Bill Of Materials establishes CNM-1314.01-0140-001 as the single source document to determine what type of fuse is required for use in Essential Motor Control Centers. This should eliminate confusion and improper fuse selection. The drawing correction helps to ensure plant configuration controls are in place. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3633

Description
This modification replaces the stem in valves 1NC-31B, 1NC-33A, and 1NC-35B with a stem using a better grade of material. All affected drawings were revised to reflect this new information.

Evaluation
From the analysis of the stem failure in the Unit 2 PORV block valve per LER 414/91-016, it was determined that the Unit 1 PORV Block Valve stems should be replaced with stems using ASME SA638 Grade 660 Type 2 with a Rockwell RMC No. of 02841. No dimensional or configuration changes are made in the new stems, and the new material prevents the stems from becoming brittle at the temperature seen in system operation. Installation was in accordance with existing maintenance procedures. Post-modification testing verified flow through the system, assured no external leakage, and verified correct operation of the operator. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.2

CE-3640

Description
This modification removes the present manway flange connections on the BB System Steam Generator Blowdown Tank and replaces it with standard forged steel flanges. The new material is SA/A105 300# class flanges.

Evaluation
This is a non-QA condition component. Engineering has evaluated this change as well as additional stress analysis and determined it to be acceptable. This change has no affect on the operation or function of this component. The materials used are in accordance with Duke Power Piping Specifications and ANSI standards. Installation was in accordance with existing maintenance procedures. This change does not affect any safety related equipment needed to mitigate the consequences of an accident. The margin of safety as defined in the

basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3645

Description
This modification changes the Unit 2 S/G level program from specifying a constant value regardless of power level to specifying a linear ramp as a function of power. The new full power S/G level setpoint was selected to match the error adjusted full power setpoint for Unit 1. In addition, the lag time constant for the median value of neutron power was changed to allow the associated CF valves to close more smoothly.

Evaluation
No hardware changes are being made and no new failure modes are identified to be associated with this modification. The probability of a unit trip during either normal power operations or anticipated operational occurrences is not increased. No system used for accident mitigation is affected by this modification. The consequences of the accidents evaluated in the SAR are not adversely affected. Neither any fission product barrier nor any source term evaluation is adversely affected. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3649

Description
This exempt change replaces PORV Block Valves 2NC-33A and 2NC-35B. In addition, the stem on PORV Block Valve 2NC-31B was replaced with a stem made of the same material as the stems in replacement valves 2NC-33A and 2NC-35B.

Evaluation
All design parameters have been reviewed and meet or exceed all required design conditions for this application. The same operators are being used so there are no physical electrical changes. Some changes are required to accommodate thrust and setup requirements. The center of gravity and weight are slightly different but are acceptable without degrading the seismic qualification of the valves or associated piping. The valve Cv is increased but is not detrimental to system function. The stroke time is not affected by this change. The component materials are compatible with the environment in which they have been placed. The stem replacement on valve 2NC-31B makes this valve similar to the replacements for valves 2NC-33A and 2NC-35B. Installation was in accordance with existing maintenance procedures. Post-modification testing verified flow through the system, assured no external leakage, and verified correct operation of the operator. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3699

Description
This modification updates incorrectly labeled RF isometrics by removing the QA condition 3 label. No field work was associated with this modification.

Evaluation
The technical justification for removing the QA condition 3 label from the designated RF isometric drawings is given in Design Study CNDS-0161. The basis for determining the proper QA condition boundaries is given in section 9.5.1 of the CNS FSAR and the Selected Licensee Commitments (Section 16.9). This change corrects the QA condition boundaries to ensure adequate fire protection for systems and components important to safety. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3707

Description
This modification removes all the fuses in each spare compartment of every Essential Motor Control Center and revises affected drawings.

Evaluation
This change is being used to partially resolve Notice of Violation 413, 414/92-01-01. Eliminating these fuses from the spare compartments prevent the possibility of someone obtaining a fuse other than those which should be procured from the QA warehouse inventory. These changes do not affect any safety related equipment or the ability of safety systems to perform their design functions. The spare breakers are turned off and are not used. Only an approved modification would allow the use of one of these compartments. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3713

Description
This modification revises CNEEs to reflect the current as-built conditions concerning Secondary Control Power Transformer fuse numbering and sizing.

Evaluation
This modification provides the correct Secondary Control Power Transformer fuse numbering and also corrects fuse sizes on various CNEEs. These changes were made so that design documents reflect the as-built condition of the station. These changes do not affect any safety related equipment or the ability of safety systems to perform their design functions. These changes do not alter any plant equipment and are administrative in nature. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3731

Description
This modification deletes support/restraint 2-R-NV-0300. This support needed to be reworked but is located in a high radiation area. Deletion is quicker than reworking this support and minimizes radiation exposure.

Evaluation
The function or operability of the NV System is not affected by deleting the above mentioned support. Engineering performed the appropriate calculations and analyses for removal of this support and determined that the NV piping is adequately supported without this support under normal and seismic events. The function or

operability of any other supports is not affected by this modification. No new failure modes were identified with this modification. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3745

Description
This modification revises CNM-1205.00-1997 to include appropriate design required information for verifying actuator torque switch settings for MOVs 1FW-01A and 1FW-32B per the requirements of NRC Generic Letter 89-10.

Evaluation
This modification does not affect any present signals that initiate valve motion. Valve operator speed and capacity is unaffected. Open and closure times of these valves are not changed and were verified by a stroke time retest as required by Technical Specification 4.0.5. This modification does not affect the valves ability to perform their design function in an accident. No safety related function of these valves is added or deleted. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3799

Description
This modification replaces valves 1NV-894 and 1NV-897, item #9J-578, with similar valves having item #9J-501. All affected drawings were revised to reflect this valve changeout.

Evaluation
The environmental characteristics of the replacement valves are lower than the original valves but satisfy the design parameters for the system application. All valve dimensions are identical. These valve replacements are acceptable substitutes and do not degrade safety or performance factors in any way. The replacement valves continue to provide all requirements necessary for plant operation and safety. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3815

Description
This modification changes the electrical grounding connections for both A and B trains of the Boron Dilution Mitigation System (BDMS).
Evaluation
Catawba has experienced voltage spikes on the BDMS which made the A Train channel inoperable. An evaluation from the vendor indicated that the grounding method utilized needed modification to reduce any electrical noise interferences. Testing indicated that the problem could be resolved by connecting the BDMS electrical enclosures to the station ground. This modification has corrected the problem. This change does no revise the system's function as described in the FSAR or Technical Specifications. No other changes were made other than grounding revisions. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3844

Description
This modification capped Unit 1 Incore Instrument Thimble D-10 at the seal table due to thimble damage.

Evaluation
Incore Instrument Thimble D-10 on Unit 1 was discovered damaged during the U1EOC6 refueling outage. The thimble is bent and will no longer pass a detector. As a conservative measure, thimble D-10 was capped with a QA-1 instrument cap. This cap was installed in accordance with approved procedures. This maintains the present NC System pressure boundary and reduces the possibility of a small break LOCA as described in Chapter 15 of the FSAR. Technical Specifications require 75% or 44 of 58 thimbles to be used during incore flux mapping. This change increases the number of thimbles which are plugged to three. Therefore, there are still 55 thimbles available for flux mapping. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3865

Description
This modification documents the installation of plugs and sleeves in the Unit 1 steam generators during the 1EOC6 refueling outage.

Evaluation
The input parameters used in the LOCA ECCS analysis and the non-LOCA analysis provide a 10% steam generator tube plugging limit. "C" steam generator is the most limiting generator with respect to tube plugging. This generator is now plugged to a level of 6%. Therefore, the steam generator tube plugging limit used in the analyses for Chapter 15 accidents is still met. Adequate controls exist with installation procedures to ensure that the installation process for plugs and sleeves do not affect steam generator material strength. Installation of tube plugs and sleeves do not degrade primary system pressure boundary integrity, but serve to maintain it. All materials comply with the Reactor Coolant and interconnected secondary system requirements as specified in the FSAR. This modification does not affect the function of any equipment or systems addressed in the FSAR. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3871

Description
This modification made hardware and software changes to the Unit 2 Digital Turbine Control System. These changes are outlined as follows: 1) Modify the logic to allow testing of Control Valve #4 when it is open at valve references higher than 82.7%. 2) Properly ground the OIU cabinets. 3) Relocate the power supply for the system fault relay to the power supply panel. 4) Modify the values for the controlling valve Closed positions to 0.5% and 1% with a new deadband of 0.5%.

Evaluation
The changes made under this modification are non-safety. The changes were made during the Unit 2 EOC5 refueling outage during the appropriate outage plant configuration such that equipment, plant, and personnel

safety were maintained. The turbine control system was retested after these modifications were implemented to ensure the system would meet its design basis. The changes made have no affect on the reactor trips associated with the main turbine. The margin of safety as defined in the basis of the Technical Specifications is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3873

Description
This modification replaces valves 2KF-7 and 2KF-22, item #5B-207, with new valves having item #5B-487.

Evaluation
The replacement valves do not affect the design conditions or the operating parameters of the system. No accident initiators are affected by the modification. No fission product barriers or source term evaluations are affected. No system used to mitigate an accident is adversely affected and there are no changes relative to any other system. Compliance with seismic and Appendix R criteria is not degraded. These changes do not affect any safety limits, setpoints, or operating parameters so the margin of safety as defined in the bases of any Technical Specification are not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3877

Description
This modification allows the use of an alternate material (ASTM A276, Type 304 stainless steel) for the studs which hold the carbon bed covers in place for the VA, VC, VE, VF, and VP filter trains.

Evaluation
The functions of all affected filter trains remain unaffected by this modification. The replacement stud material and welds are QA Condition 1 and compatible with the environment and interfacing components. No other plant systems are affected. Compliance with applicable seismic criteria is not degraded. No common failure modes are created by this modification. Neither any fission product barrier nor any source term evaluation is affected. No change is made to any setpoint, design limit, or operating parameter so the margin of safety as defined in the bases of any Technical Specification is not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3901

Description
This modification adds a note to drawing CNM-1212.03-002 to allow a material substitution for the aftercooler partitions of the Diesel Generators. The substitution allows for the use of ASME SA 240 Type 304 material in lieu of SA515 grade 70.

Evaluation
No system used for any of the phases of normal plant operations is affected by this modification. The ability of the VG System to respond to the Diesel Generator design basis accident is not affected by this modification. Compliance with applicable environmental and seismic criteria is not adversely affected. Diesel Engine Starting Air (VG) System design specifications remain bounding. Replacement partitions are compatible with both

interfacing components and with their environment. No new failure modes nor common cause failure modes are created as a result of this modification. Neither any fission product barrier nor any source term evaluation is affected. No change is made to any setpoint, design limit, or operating parameter so the margin of safety as defined in the bases of any Technical Specification are not reduced. Therefore, the implementation of this modification does not represent an unreviewed safety question.

CE-3920

Description
This exempt change replaced spring packs on valves 1RN847A, 1RN848B, 1RN849B, 2RN846A, 2RN847A, 2RN848B, and 2RN849B with Limitorque model 0101-099. This modification was necessary since the valve body was replaced and the existing actuator was left in place. The new valve required a different torque setting

Evaluation
The new spring packs will have the same form, fit, and function as the old spring pack. The modification does not affect the valves ability to perform their required function during an accident and does not affect operation of the RN system. Therefore this modification does not create an unreviewed safety question.

CE-3938

Description
This exempt change revises station documents to allow the use of Fine Filtration Cartridges as an acceptable substitute for the Spent Fuel Pool Cooling Pre and Post Filters.

Evaluation
The new filters meet or exceed design parameters as specified in the SAR. Also, no component or system used to mitigate any accident is adversely affected by this document change. The new filters are rated to a maximum temperature of 180° F. If all Pool Cooling is lost, the pool is designed to reject heat by boiling. Should this occur, Operator action is required to isolate the new filters from the increased temperatures. A procedure change is therefore required associated with this modification to ensure the integrity of the filter is maintained. Therefore, no consequences of a malfunction of equipment important to safety will be increased. Neither any common cause failure modes nor any new failure modes are created. Therefore, this modification does not create an unreviewed safety question.

CE-3943

Description
This modification replaces the absolute level L&N transmitter 0YNLT5750 with a Rosemount 1151DP3E22B2. This also requires the installation of a Lambda power supply LDS-Y-03 to power the transmitter loop. In addition fuse BE-1/0ELCP0009 is replaced with fuse FLQ-3 to increase the circuits rating from 2 amp to 3 amp. The previously used L&N transmitter was provided with an optional power supply to power the loop. Since the Rosemount does not have this option an alternate power supply is provided.

Evaluation

This is a none safety related system used to provide non-safety related cooling to various plant components. This modification will restore the associated instrumentation within the system to proper operation. Therefore, this modification does not create an unreviewed safety question.

CE-3965

Description
This exempt change adds a wiring diagram to CNM-1211.00-0072-005 to allow for proper maintenance.

Evaluation
This modification does not affect the operation of the YC system but only provides additional wiring information to ensure proper wiring of the equipment during maintenance. Therefore, this modification does not create an unreviewed safety question.

CE-3954

Description
This exempt change replaces a pressure transmitters 0NBPT6530 & 0NBPT6540 with pressure gauges.

Evaluation
This modification replaces overranged transmitters with properly ranged local gauges. The transmitters are needed since the manual loader that the transmitters input to are located directly next to the manual loader used to control the process. The input to the manual loader was only for indication anyway. Therefore the ability to control the Recycle Evaporator Feed Demineralizer is enhanced by this modification by providing better indication and this modification does not create an unreviewed safety question.

CE-3962

Description
This exempt change adds documentation to the vendor drawing for a spacer that was inserted under a repair work request to a WZ pump motor.

Evaluation
The addition of the spacer to the pump shaft was required so that a pump shaft manufactured on site would properly couple to the pump motor. The operation of the pump/motor was in not affected by this change and therefore this modification does not represent a an unreviewed safety question.

CE-3964

Description
This modification deletes T/C indication for the YC Chiller compressor motor stator temperature. A replacement motor being installed did not allow for the pressure fittings required for the T/C's to enter the motor. It was determined that this temperature point was not required. A later Variation Notice, CP-851 was written to relocate this T/C to a point to monitor YC compressor motor casing temperature.

Evaluation

The stator temperature sensors do not serve any safety function. In addition there are two other T/Cs that are supplied for equipment protection. therefore deletion of this point does not create any unreviewed safety question. Variation Notice CP-851 written against this exempt change revised the modification to keep the T/C in service but relocate it to the motor casing. By adding monitoring capability for the motor casing with alarm setpoints. Reactivating the T/C for this purpose does not affect component operation and only adds additional monitor capability. Therefore this variation notice also does not create an unreviewed safety question.

CE-3969

Description
This exempt change replaces the spring pack on 1ND-59B with Limitorque model # 0301-111 and changes item number to 09J-619 to allow proper set-up range as required by GL 89-10.

Evaluation
The new spring pack will have the same form, fit and function as the old spring can and does not affect the valves ability to perform it's design function. Therefore this modification does not create an unreviewed safety question.

CE-4041

Description
This exempt change revises the thrust values for valves 2SV-025B, 026B, 027A, and 028A in CNM-1205.00-1997, "Torque Switch Setting Sheets". Torques switch settings are increased from 2% to 7% due to changes in Design's undervoltage calculation method.

Evaluation
This change does not affect any present signal to the valve. Valve operator speed and capacity is unaffected. Stroke times are also not affected nor does this change affect these valves ability to perform their design function during an accident. Therefore this modification does not present an unreviewed safety question.

CE-4049

Description
This minor modification revises the Unit 2 S/G Tube Map to reflect tubes plugged and stabilized during 2EOC5 refueling outage.

Evaluation
The number of S/G tubes plugged is an input to the Westinghouse ECCS analysis model. Per Westinghouse calculation DCP-88-600 (revised under CN05828) supports a tube plugging level up to 10%. Upon completion 2EOC5 refueling S/G work the S/G with the largest number of plugged tubes contains 43 plugs which equates to a plugging level of 0.94%. Therefore the ECCS model is not affected.

In addition, the worst case scenario of a failed tube plug is a judged to be a single tube rupture. A single tube rupture is a design basis accident and is addressed in the FSAR. The installation of tube plugs does not affect this accident.

The use of S/G tube stabilizers to eliminate the potential for S/G tube rupture or damage to surrounding tubes in the event of a tube rupture. The design of the cable stabilizer is such that the applied loadings and resultant stresses are controlled to an acceptable level to alleviate the potential for tube sever. Because of geometry constraints, significant relative motion between the installed cable tube damper assembly and associated tube would not be expected as the stabilizer would be forced to move with the tube. Thus, the potential for wear the inner diameter of the tube is judged to be negligible.

Adequate controls exist for tube plugging installation procedures such that tube material strength is not affected. However, in the event of tube cracking and imbrittlement, the worst case failure is judged to be a single rupture event and this is the design basis addressed in the FSAR. Tube plugs will not degrade the primary boundary integrity but will help maintain the RCPB.

Based on the discussion above this minor modification does not represent an unreviewed safety question.

CE-4053

Description
This minor modification revises drawing CNM-2201.01-0103 001, CMN-2201.00-0059 002 and Westinghouse Stress Report CNM-2201.01-0217 001 to allow repair of a S/G manway stud hole by use of a helicoil.

Evaluation
The use of Helicoils has been previously evaluated for use this application and is therefore not addressed in this analysis. Increasing the allowable hole size for use of the Helicoil is discussed and calculations demonstrating that this is acceptable are documented. Therefore this minor modification does not represent an unreviewed safety question.

CE-4054

Description
This minor modification removes Unit 2 incore thimble B-3 for service due to high wear rate and places into service thimbles J-1, N-6, and R-11. Items 42, 50, 54, 55 are removed from the B-3 thimble and are installed on those being placed into service.

Evaluation
The B-3 thimble is removed from service based on 2EOC5 refueling ECT results indicating excessive wear. The three returned to service were all verified to have exhibited acceptable wear rates and are returned to service to provide 54 of 58 operable thimbles (93%). Tech Spec require 75% to be used during flux mapping. The installed cap will ensure an acceptable pressure boundary for thimble B-3 and the wear rates for J-1, N-6, and R11 are such that RCS pressure boundary will not be adversely affected. Therefore, this minor modification does not represent an unreviewed safety question.

CE-4065

Description
This minor modification increases the allowable tube plugging allowance to 40 tubes in tube pass for the KD Hx's

2A and 2B as specified on Test Acceptance Criteria Data Sheets.

Evaluation
The required heat transfer area for the KD Hxs is defined by the amount of heat rejected to the KD system by the D/G during actual performance testing. The requirements for fluid flow rate, heat transfer surface area, and surface fouling are determined in CNC 1223.59-01-0005. These parameters must combine to provide the required heat transfer capacity. Maintaining the current flow rates , the analysis has been revised for a heat exchanger with up to 40 tubes plugged and determined to be acceptable. It has been determined that the equivalent heat transfer will be preserved and that the operation of the D/G will be unaffected. Therefore this modification does not represent an unreviewed safety question.

CE-4094

Description
This modification provides limit actuated open torque switch bypass contacts which are adjusted for valve open travel span on MOVs 1RN028A and 1RN038B. The purpose of this modification is to increase the valves reliability to open when required.

Evaluation
Adding the open torque switch bypass will only increase the reliability of these valves to operate when required. The modification will not affect any present signal that initiates valve motion. Open and close stroke times will not be affected. Therefore this modification does not represent an unreviewed safety question.

CE-4096

Description
This modification adds a second Emergency Shutdown System Soundpowered Jack Station in the Technical Support Center.

Evaluation
This jack station is not safety related and is not involved in any equipment that is safety related. NO operation parameters, safety limits, or setpoints will be changed and therefore the basis of Technical Specifications is not affected. Therefore this modification does not represent an unreviewed safety question.

CE-4154

Description
This modification revises CNM-1205.00-1997 to include appropriate information for verifying actuator torque switch settings per the requirements of NRC GL 89-10 for 1SM077A.

Evaluation
The document change for 1SM077A is a revision to the Torque Switch Settings Sheet which serves as the source for valve testing and set-up data. This modification does not affect the valve's ability to perform its design function during an accident. No safety related functions are added or deleted from this valve. Therefore this

modification does not create an unreviewed safety question.

CE-4158

Description
This minor modification removes instrument 0YFTH5220 and plugs process taps.

Evaluation
The minor modification removes an instrument that has been deemed not required for system operation. The instrument had been overpressurized and would result in unnecessary maintenance costs. This instrument does not serve any safety related function and therefore this modification does not create an unreviewed safety question.

CE-4161

Description
This minor modification is an editorial change wherein the controller setpoint for 1YM12 varies from 12-15 psig rather than 9 psig.

Evaluation
The I&C list already allowed for this setpoint to be varied and therefore this is an editorial change only. Therefore this modification does not create an unreviewed safety question.

CE-4162

Description
This minor modification revises vendor manuals, adds a note, and the vendor manual number to the Electrical One line drawing to clearly define the fuse type used in Nelson electric motor and distribution control centers. It also upgrades the fuse type.

Evaluation
This revision adds clarification to the vendor manual fuse numbers. Except for adding the upgrade fuses these changes are considered editorial and therefore do not create an unreviewed safety question. The upgrade fuses have higher current interrupting capability than the original, therefore no margin of safety will be reduced. The physical size is such that seismic qualification is not a concern. Distribution of power and loads for normal and accident mitigation will not be degraded due to the basic circuit protection features remaining the same. Therefore this modification does not create an unreviewed safety question.

CE-4163

Description
This minor modification adds valve tag downstream of valve 1NI-210. The new valve is a 1/2" and the existing valve is a 3/4" therefore a reducer is also required.

Evaluation

The purpose of this modification is to allow a permanent means of bleeding off pressure trapped between the Unit 1 cold leg discharge check valves (1NI-165,167, 169, 171) and the N pump discharge check valves (1NI-116, 148). This is necessary to prevent pump discharge relief valves (1NI-119, 151) from lifting. The use of this valve for bleeding pressure off of the header is addressed in the 50.59 associated with a compensatory action and is described under that 50.59 separately. The additional weight of the valve, reducing insert, pipe, and pipe cap have all been evaluated and determined to be acceptable. No seismic concerns were identified. The weld downstream of this valve has been reinstated as class B. Although this weld had been previously downgraded to class G, no physical changes were made. In conclusion the new valve will not downgrade safety performance factors in any way. This valve is a vent and is not required for unit shutdown or containment isolation. Therefore this modification does not create an unreviewed safety question.

CE-4170

Description
This minor modification replaces valve 2RN-034 with blank spool piece to eliminate a potential bypass leakage path.

Evaluation
This valve provides a drain path to the lake for the RN A supply header for maintenance purposes only and serves no safety function. The fabricated blank spool piece has been designed to maintain the RN pressure boundary without revision to the existing piping. The spool piece was calculated to weigh significantly less than the valve it replaces and has minimal CG impact therefore there is not a seismic concern. This modification does not change design parameters nor will the effectiveness of plant equipment important to safety be degraded. Therefore this modification does not create an unreviewed safety question.

CE-4173

Description
This minor modification installs an orifice between valves 1NI-210 and 1NI-482. Valve 1NI-482 is also replaced with new item number CMV-589. The purpose for these changes is to provide a means to bleed off pressure from the N system.

Evaluation
The installation of an orifice is to provide for a pressure drop and limit the flow through this line for depressurization. The orifice is designed to limit flow to 0.3 gpm. By establishing this bleed off flow the NI relief valves will be prevented from lifting unnecessarily. The new valve is designed for a throttling function. The additional weight has been evaluated and no seismic concerns were identified. The orifice is class B and the downstream fittings, tubing, and the new valve are class E. Should the class E portion fail the orifice re = mains intact and limits the leakage from the NI system to 0.3 gpm which has been determined to be acceptable. Therefore the new valve and orifice do not degrade the safety performance factors in any way and do not create an unreviewed safety question.

CE-4176

Description

This modification removes the diaphragm seal from 0NRPG5660. It has been determined that this seal is not required and by eliminating it maintenance costs will be decreased.

Evaluation
The diaphragm seal has been deemed unnecessary for the proper operation of the pressure gauge and its removal will reduce the time required replace and calibrate it. The gauge is only used for indication of Boron Recycle feed preheater outlet pressure and serves no safety function. Therefore this modification does not create an unreviewed safety question.

CE-4179

Description
This minor modification installs lifting lugs to the top of the reactor coolant pump motor flywheel cover (top hat) to allow for maintenance and flywheel inspection.

Evaluation
The use of these welded lugs provides for an improved means of lifting the reactor coolant pump motor covers. Both personnel safety and exposure improvements are gained. These new lugs will not affect the FSAR or Technical Specifications and therefore will not create an unreviewed safety question.

CE-4211

Description
This minor modification replaces valve 1NI-482 to new item number DMV-678 which is more suitable for the throttling application.

Evaluation
The installation of this new valve is to provide for throttling capability to establish flow through this line for depressurization of the N system header. The valve will be throttled to a flow rate of <0.14gpm. By establishing this bleed off flow the N relief valves will be prevented from lifting unnecessarily. The new valve is designed for a throttling function. The additional weight has been evaluated and no seismic concerns were identified. The weld downstream of 1NI-210 has been reinstated as Class B. Although this weld had at one time been downgraded to Class G, no physical changes were made. The new valve is Class B. A limit of 0.14 gpm has been established for flow through this valve this leakage from the N system has been determined to be acceptable. Therefore this the configuration do not degrade the safety performance factors in any way and do not create an unreviewed safety question

CE-4231

Description
This minor modification revises vendor manual CNM-1201.05-0273 to reflect a recommendation from Goulds pumps for setting of casing wear ring to impeller wear clearance.

Evaluation
The setting of were ring clearances by Goulds Pumps has been developed based on diameter of the rotating member, with corrections applied for material and temperature variations. For an 11 inch wear ring (CNS KC

Pumps), regardless of new or used, the Goulds Savannah Pro Shop recommends using 0.028 inches diametric clearance (0.023" by ring diameter and .005" correction for gallable 300 series SS). Goulds also advises the discontinuation of the 0.010" and 0.014" range as a setup clearance for either re-used or replacement wear rings. Discontinuation of use of the 0.010" and 0.014" range does not increase the probability of an accidents because the KC pumps are not accident initiators. The consequences likewise will not be increased since clearances will be set according to manufactures recommendations and the pumps performance will be unaffected by this change. The probability of equipment malfunction is decreased by this modification because the potential for rotor seizure is decreased. Therefore this modification does not create an unreviewed safety question.

CE-6002

Description
This Exempt Change installs air conditioning units on the Unit 1 D/G non-emergency trip monitor panels 1ELCP0029 and 1ELCP0030. This change also adds terminal blocks inside 1ELCP0029 and 1ELCP0030 to facilitate maintenance.

Evaluation
The non-emergency trip monitors were installed under an earlier modification to replace the non-safety portion of the diesel vendor's pneumatic trip logic. These monitors are not safety related and trip the D/G only during manual starts. The addition of panel air conditioners will improve the reliability of the trip monitors. Calculations have confirmed that the seismic mounting of the monitors are not affected by this modification. To make future maintenance and testing easier, terminal strips are installed in the rear of each monitor panel. The non-emergency trip monitors are physically and electrically isolated from the safety related portions of the emergency D/G controls. The A/C is powered from a separate non-safety power source than the trip monitors and the terminal strips do not functionally change the circuit design. Therefore this modification does not represent an unreviewed safety question.

CE-60015

Description
This exempt change allow core drills to be made in the Auxiliary Building and Auxiliary Service Building walls to allow temporary piping to be installed during an upcoming RN piping drain down. This change also make an editorial correction to CN-1224-55 by removing the QA Condition 3 stamp.

Evaluation
The floor slabs in the Service Building are non-QA, and they are not committed fire boundaries. Therefore the core drills in this location will have no impact on any plant equipment important for plant shutdown. The QA wall line is QA 1 non- structural fire boundary. The seismic integrity of this wall has been verified acceptable with the core drill. All the opening will be fire-stopped in accordance with drawings. The wall at line 58 is a 3 foot thick QA 1 wall and not a fire boundary. This wall has been verified acceptable with the core drill in place. Therefore this core drill will not impact any systems, components, structures important to plant safety. Therefore this modification does not represent an unreviewed safety question.

CE-6021

Description

This exempt change adds plastic drain piping between valves 1RN53B and 1RN54A to facilitate RN header draining to class C drain valves 1RNE35 and 1RND03.

Evaluation
The plastic piping will be Class G, non-safety related. Due to the potential structural interaction between the class C and G piping, an overlap area using QA 1 supports will be installed. This will structurally isolate the effects of the class G piping from the class C piping during an SSE. The class C piping will remain capable of performing their required function. Therefore this modification does not represent an unreviewed safety question.

CE-60023

Description
This minor modification replaces Esterline 1124E chart recorded on 2DGCPA and B with Wetsonics DDR10 recorders.

Evaluation
This modification replaces obsolete recorders with digital data recorders. The power and signal connections are the same. An additional 4 data points are also added since the new recorders have added capacity. The chart recorders do not perform a safety function and are not evaluated in the FSAR. This modification does no more than replace an existing non-safety related component with an updated equivalent component and therefore does not create an unreviewed safety question.

CE-60026

Description
This exempt change adds a third spring to the SG PORV actuators. This change will increase the closing thrust by approximately a factor of two. This change also revises the maximum steam line pressure at which the SG PORV is assumed to open against. The new value is the setting of the first MSSV plus 3%. This is equivalent to 1175psig + (.03)(1175psig)= 1210.

Evaluation
The SG PORVs are evaluated in section 15.1.4 of the FSAR. This accident assumes that the SG PORV fails to close, once open. This change, while slightly increasing the opening time, will not degrade the ability of the valve to close. The accident mitigation function of the SG PORVs is cooldown following a SGTR. This is accomplished thru manual control via safety grade nitrogen supply. This function has not been degraded by this modification. The spring being added compatible with the existing actuator since the original design of the actuator was for three springs. No seismic or environmental qualification concerns are created by this change. Therefore this modification does not represent an unreviewed safety question.

CE-60027

Description
This exempt change modifies piping supports restraints to reduce the stress added when plastic drain lines are added to the branch lines of the RN header for draining of RN during the refueling outage under CE-60021.

Evaluation

The purpose of the supports is identical to that of the supports installed under CE-60021. The plastic piping will be attached to the drain locations at class C isolation valves; 1RNC87, 1RND04, and 2RNC87 and Class F isolation valves; 1RNC88, and 2RNC88. The QA 1 supports added by this modification will isolate the affects of this piping to assure the integrity of the drain valves even under SSE loadings as verified in design calculations. Therefore this modification does not create an unreviewed safety question.

CE-60029

Description
This exempt change replaces all Unit one Durant counters (total of ten) with digital MWH counters. This is a direct replacement.

Evaluation
The existing MWh counters are obsolete and spare parts are not available. The replacement counters have the same dimensions and function as the original. The new counters weigh five pounds or less and will not degrade the seismic qualification of the control board. These counters are used to show MW generation and monthly power usage. Therefore this modification does not represent an unreviewed safety question.

CE-60030

Description
This exempt change replaces all Unit one Durant counters (total of ten) with digital MWH counters. This is a direct replacement.

Evaluation
The existing MWh counters are obsolete and spare parts are not available. The replacement counters have the same dimensions and function as the original. The new counters weigh five pounds or less and will not degrade the seismic qualification of the control board. These counters are used to show MW generation and monthly power usage. Therefore this modification does not represent an unreviewed safety question.

CE-60038

Description
This modification converts the existing Cold Lab into a Hot Lab by rerouting drains from Floor Drain C to the Floor Drain Tank.

Evaluation
This modification affects components of the Liquid Radwaste System (WL). The WL systems is not an initiator of any accident previously evaluated in the FSAR. The Recycle Holdup Tank capacity is not affected by this change. The analysis of the WL system failure reported in the FSAR remains limiting. Neither source term evaluations, nor fission product barriers are degraded. The piping reroute for the Hot Lab is not safety related and cannot affect any safety related equipment. Due to the piping being class H, an iodine equivalent limit of 5E-2 microcurie/ 1 ml and a total limit of 1 microcurie/ml for samples being disposed in the sink is not to be exceeded. Given these limits, any releases from the failure of this piping will be with DPC Nuclear Guidelines . Therefore this modification does not create an unreviewed safety question.

CE-60046

Description
This exempt change adds a fuse block and provides wiring for RN Pump 2A and 2B discharge valves 2RN028A and 2RN038B to fuse the Control Room Indication and the Motor Operator Valve Starter Controls separately.

Evaluation
This modification will result in meeting proper power separation requirements in the event that a control room problem may cause a fuse to blow and eliminate power to the RN pump switchgear control interlock used to provide automatic opening of these vales on its associated pump start. Making these changes does not create an unreviewed safety question.

CE-60047

Description
This exempt change replaces MW 38 with Ralon Model # 16004. This change also makes some editorial changes and does not require any field work.

Evaluation
A 50.59 evaluation was completed for this modification and it was demonstrated that this modification does not create an unreviewed safety question. Since this modification is considered safeguards in nature no additional details will be provided in this report. However, the completed 50.59 is available was the original of modification package.

CE-60063

Description
This minor modification updates the low voltage load list data base to as-built plant conditions. The change also deletes CNLT-1752-01.13-01, CNLT-1752-01.14-01, CNLT-2752-01.13-01 and CNLT-2752-01.14.01 since these CNLt's are adequately documented in the electrical one-line lists.

Evaluation
This minor modification only makes editorial changes only to update drawings to the as-built condition of the plant. Therefore this modification does not create an unreviewed saefty question.

CE-60070

Description
This minor modification adds new Instrument Air System (VI) isolation valves to the Main Steam Isolation valves (MSIV). It also relocates four filter regulators and four VI isolation valves for the MSIV bypass Valves to an accessible location. These changes are to improve personnel safety when accessing these valves.

Evaluation
The new valves and tubing are non-safety related. The air is supplied to the valves to open and maintain the

valves open. No new line break interactions and no new seismic interactions have been created by this modification. The VI system is not an accident mitigation system and it is consistently classified as non-QA. The ability of the MSIVs and their bypass Valves to close is unaffected by this modification as the vent path provided by the safety solenoid are not affected by this modification. Therefore this modification does not create an unreviewed safety question.

CE-60072

Description
This minor modification documents the issuance of the Process Control System Scaling Manual.

Evaluation
The manual issued is a modified version of the McGuire Manual MCM-1201.00-0035 modified to reflect the current as built condition of the plant and its issuance does not involve the installation of a new system or an addition to an existing system. Therefore this modification does not create an unreviewed safety question.

CE-60075

Description
This minor modification provides cooling for the Control Room Radiation Monitor Cabinets 1ARADMON and 2ARADMON by connecting duct from the cabinet to the return side of the VC System. This modification had previously been installed under TSM# 92055983 01.

Evaluation
The Rad Monitors are not initiators of any accident described in the FSAR. The operation nor the intent of the Rad Monitors will not be affected by this modification. The design intent of the VC system , to maintain control room habitability and temperature control, will not be changed. All design functions will remain the same for both the Rad Monitors and the VC system. Therefore this modification does not create an unreviewed safety question.

CE-60077

Description
This minor modification allows craft the option to drill the same size hole in the electray splice plate at the sane location as vendor M P Huskey has previously furnished. The electray currently being received from the vendor no longer have pre-drilled holes.

Evaluation
The new electray plate with the Duke Power drilled holes have been shown to be essentially identical to the previously supplied splice plate. Therefore this modification does not create an unreviewed safety question.

CE-60080

Description

This minor modification revises the process range of level transmitter CN0YMLT5260 from 0-102 INWC to 20-122 INWC. This change is necessary to account for the 20 INWC in the high pressure leg.

Evaluation
This minor modification will not involve a Structure, System, or Component (SSC) that is addressed in the FSAR. In addition this modification will not degrade the effectiveness of an SSC important to safety in any design basis accident or event. Therefore this modification does not create an unreviewed safety question.

CE-60084

Description
This minor modification revises the fire hose cabinet detail on CN-1220-72 to meet QA Condition 4 requirements.

Evaluation
This modification does not impact any as built fire hose cabinet supports and is strictly an editorial. The revision only upgrades the fire hose cabinet support details shown on drawing CN-1220-72 from "Non-Nuclear Safety Related" to QA Condition 4. Therefore this modification does not create an unreviewed safety question.

CE-60085

Description
This minor modification revises ICS-A-20.1 to provide some clarification on materials for QA Condition 1 instrumentation serving safety function and non-QA Condition instruments connected to Use Code 8 impulse lines.

Evaluation
These revisions are editorial in nature and require no field work to be implemented. This modification does not affect Structures, Systems, or Components (SSC) referenced in the FSAR in a significant manner. Therefore this modification does not create an unreviewed safety question.

CE-60086

Description
This minor modification is an update to the Safety Related and Non-safety Related Areas Pre-Fire Plan and Related Strategies to satisfy the Corrective actions stated in PIP 0-C93-0136, 0141 and 0142.

Evaluation
The revisions to the pre-fire plan have no impact on the design or operation of any fire protection system or component. This information is added to the pre-fire plan to enhance the information available to the Control Room and the Fire Brigade Incident Commander during fires at Catawba. Therefore this modification does not create an unreviewed safety question.

CE-60087

Description

This modification replaces the expansion bellows on the HE extraction line. This line provides steam from the ninth stage of the Low Pressure Turbine exhaust to the E Feedwater Heater. The existing bellows assembly has failed and is leaking.

Evaluation
The bellows assemble being replaced under this modification, 1HE-5, is not an accident initiator. The joint does provide protection for the condenser shell whose function is evaluated in the FSAR 15.2.3 in potentially causing Turbine Trip. Increases in secondary Steam Flow, FSAR 15.1.3, and decreases in Feedwater Temperature, FSAR 15.1.1, were all evaluated and determined not to be applicable relative to this change. Since the replacement expansion joint will provide equivalent or superior protection for the Condenser shell and the ninth stage Turbine exhaust, failures of any of these components is not more likely. Therefore this modification does not create an unreviewed safety question.

CE-60092

Description
This minor modification revises documentation to allow use of EGS Bayonet Connectors to seal cable entrances on Rotork actuators. Currently with the use of Swagelock quick connects requires that the actuator be rewired in the field each time the actuator is replaced.

Evaluation
The environmental and seismic Qualification of EGS Bayonet Connectors has been verified acceptable. This minor modification provides an alternative means of sealing Rotork actuators. The EGS connectors will perform the same function as the Swagelock connectors now used. Will not degrade the effectiveness of any structure, system, or component important to safety in any design basis event. Therefore this modification does not represent an unreviewed safety question.

CE-60094

Description
This minor modification issues insertions to the Westinghouse 7300 Equipment Reference Manual. PIR's 0-C92-0813 and 0-C93-0086 identified fuses in the circuit cards that were not specified in the Bill of Materials.

Evaluation
The insertions are being issued to match the current as built condition of the plant and their issuance does not involve the installation of a new system or an addition to an existing system. Therefore this modification does not create an unreviewed safety question.

CE-60095

Description
This minor modification revises CNS-1390.01-00-0098, "Specification For Installation and Repairing of Cable Penetration Firestops" to state that pipe caps are required on both sides of spare penetrations rather than one side.

Evaluation
This is an editorial change only. No field work is required since all Catawba penetrations were reviewed and determined to have two pipe caps. Therefore this modification does not create an unreviewed safety question.

CE-60105

Description
This modification will revise RN and KC Test Acceptance Criteria (TAC Sheets) to allow reduced RN flow to KCHXs for Train A only.

Evaluation
The required heat transfer capacity of the KC and NS Hxs is defined by the current design basis LOCA peak containment pressure analysis. The specific heat transfer capacities and parameters affecting heat transfer capacity are documented in engineering calculation CNC-1223.23-00-0029. Analysis for the KC and NS Hxs has shown that the new values are acceptable. In addition, it is clear that the performance of an on-line KC train will not be degraded by reliance on the new Test Acceptance Criteria. Therefore this modification does not create an unreviewed safety question.

CE-60106

Description
This minor modification deletes the ESF signal (Ss-O) from the RN supply header isolation valves (1RN067A, 1RN069B) and the KC Heat Exchanger inlet isolation valves (1RN287A, 1RN347B).

Evaluation
By deleting the open signal to these normally open valves and maintaining the valves de-energized in the open position, these valves will no longer be required to be tested under the IWV and 89-10 valve test programs. Since the only function of these valves is to remain open all design basis events are satisfied. The 1.47 bypass panel is modified to alarm anytime one of these valves is intermediate or closed. This will ensure that valve position is continuously monitored in the Control Room. Therefore this modification does not represent an unreviewed safety question.

CE-60107

Description
This modification replaces MW 24 with Racon Model No. 16004.

Evaluation
The 13000 series is no longer available and has been replaced with the 16000 series. The 1600 series has been evaluated and found to be an acceptable replacement for this application.
This modification will not degrade the effectiveness of any structure, system, or component that is evaluated in the FSAR, it will only enhance the ability of the operators to quickly determine the status of monitored systems and components. Therefore this modification does not create an unreviewed safety question.

CE-60108

Description
This minor modification deletes the ESF signal (Ss-O) from the RN supply header isolation valves (2RN067A, 2RN069B) and the KC Heat Exchanger inlet isolation valves (2RN287A, 2RN347B).

Evaluation
By deleting the open signal to these normally open valves and maintaining the valves de-energized in the open position, these valves will no longer be required to be tested under the IWV and 89-10 valve test programs. Since the only function of these valves is to remain open all design basis events are satisfied. The 1.47 bypass panel is modified to alarm anytime one of these valves is intermediate or closed. This will ensure that valve position is continuously monitored in the Control Room. Therefore this modification does not represent an unreviewed safety question.

CE-60109

Description
This minor modification updates the FIrs Protection Layout and Boundaries drawing (CN-1209-10 series) to reflect the replacement of the Halon extinguishers with CO2 fire extingushers. Halon has been identified as a ozone depletion agent.

Evaluation
The FSAR states that fire extingushers will be provided in accordance with NFPA10. NFPA10 discusses Class A, Class B and Class C fires. Halon fire extingushers are rated for all three of these. CO2 fire extingushers are only rated for Class B and C, not Class A. Catawba has taken credit for fire hose stations to provide Class A fire protection throughout the plant except for the Control Room and the essential Switchgear Rooms. These locations are provided with water fire extingushers for Class A protection. Therefore the replacement of Halon fire extinguishers will not degrade the plants ability to control and extinguish Class A, B or C fires and does not create an unreviewed safety question.

CE-60112

Description
This minor modification corrects error in the Equipment Qualification Master LIst for the LD, Diesel Lubricating Oil System. The correction changes the LD pressure transmitters from "harsh" to "mild" environment. A typographical error is also corrected to indicate the correct unit for a Unit 2 instrument location.

Evaluation
This modification only corrects erroneous information in the EQML and does not physically affect a Structure, System, or Component that is evaluated in the FSAR. Therefore this modification does not create an unreviewed safety question.

CE-60113

Description
This minor modification provides drawings to reflect the as-built condition of the plant as the result of new 20 circuits added to the Administration Building lighting panelboard AL-4 to accommodate new security search

equipment.

Evaluation
This modification does not involve any structure, system, or component that is evaluated in the FSAR and does not degrade the effectiveness of any evaluated in the FSAR. Therefore this modification does not create an unreviewed safety question.

CE-60115

Description
This minor modification replaces expansion bellows 1HD-5 and 1HD-6 in the 1C Main Condenser due to damage detected during inspection. In addition vibration probes are added to the expansion as necessary to monitor vibration levels to determine the cause for the damage.

Evaluation
The bellows assemble being replaced under this modification, 1HD-5, and 1HD-6 are not accident initiators. The joints do provide protection for the condenser shell whose function is evaluated in the FSAR 15.2.3 in potentially causing Turbine Trip. Increases in secondary Steam Flow, FSAR 15.1.3, and decreases in Feedwater Temperature, FSAR 15.1.1, were all evaluated and determined not to be applicable relative to this change. Since the replacement expansion joint will provide equivalent or superior protection for the Condenser shell and the ninth stage Turbine exhaust, failures of any of these components is not more likely. Therefore this modification does not create an unreviewed safety question.

CE-60116

Description
This minor modification provides the option for leak repair of valve 1NC298 to repair a body to bonnet leak. This would be accomplished by installing a clamp on the body to bonnet flange and injecting sealant into the clamp.

Evaluation
The pressure boundary of valve 1NC298 will not be degraded by this modification. However the sealant could be in contact with the Reactor Coolant. The sealant gas been determined to be qualified for contact for the conditions of this application. In addition,the amount of sealant and the pressure of the injected has been specified to ensure that neither the valve nor the NC system is degraded. The components to be added both are compatible with interfacing components. Compliance with seismic and environmental criteria is not degraded. Therefore this modification does not create an unreviewed safety question.

CE-60117

Description
This minor modification revises the EQ Master List to correct the location and environment listed for LD pressure transmitters 1/2LDPT5142, 5143, 5144, 5172, 5173, & 5174. When the environment is corrected to show a mild location, the entry for "initial installation Date" an Qualified Life" are no longer required.

Evaluation

This modification only corrects erroneous information in the EQML and does not physically affect a Structure, System, or Component that is evaluated in the FSAR. Therefore this modification does not create an unreviewed safety question.

CE-60118

Description
This minor modification declassifies the Waste Gas (WG) system Compressor Skid to from QA-1/Class C to QA-4/Class E. No physical changes to the plant will occur as a result of this modification.

Evaluation
This modification does not make any physical changes to the plant. Rather, a change to the Design Basis on which future changes will be made. The relevant accident evaluated in the FSAR is 15.7.1, "Radioactive Gas Waste System Leak or Failure". This accident evaluates the rupture of a Waste Decay Tank. Since the tank is assumed to just rupture even though it is designed not to, the quality of the tanks (QA-1) is therefore not affected. Any replacement of pressure boundary components will meet seismic design requirements while ensuring an earthquake does not initiate an accident. The QA-2/Class E design assures that compatibility between materials selected for the system and gas/fluid contained in the system. No accident mitigation equipment will be affected by this modification.

Declassification of the part of the WG system therefore does not create an unreviewed safety question.

CE-60121

Description
This minor modification replaces Racon Model 13000 unit with a Racon Model 16004 for MW29.

Evaluation
The 16004 is the recommended replacement for the model 13000 unit. The EXA system is non-QA and there are no Technical Specifications affected by this modification. This modification will not degrade the effectiveness of any structure, system, or component that is evaluated in the FSAR, it will only enhance the ability of the operators to quickly determine the status of monitored systems and components. Therefore this modification does not create an unreviewed safety question.

CE-60124

Description
This minor modification replaces Racon Model 13000 unit with a Racon Model 16004 for MW25.

Evaluation
The 16004 is the recommended replacement for the model 13000 unit. This change is not safety related and is not involved in any equipment and/or system that is safety related. The probability or consequences of a malfunction of equipment important to safety is not increased. This change does not induce any new failure modes. Therefore this change does not create an unreviewed safety question.

CE-60125

Description
This minor modification updates flow diagram CN-1599-2.3, layout drawing CN-1518-06.85-02 and CN-1518-06.85-04 and the valve cross reference list to indicate the as-built fire sprinkler piping arrangement.

Evaluation
The revisions to these drawings reflect the as-built conditions and have no impact on the existing design or operation of any fire protection system or component. Therefore this modification does not create an unreviewed safety question.

CE-60127

Description
This minor modification adds alarm circuit for ingress on exit turnstile.

Evaluation
This modification is considered Safeguards Information and therefore a detailed evaluation is not included in this report. However, a detailed 50.59 was completed for this modification that concluded that a unreviewed safety question does not exist and is included with the original of the modification package.

CE-60128

Description
This minor modification revises the typical support options for attaching to cable tray grid steel on drawing CNIA-0001.

Evaluation
This modification does not change the support system for instrumentation. It allows more versatility in the support attachments while retaining the original criteria for the tubing system itself. Therefore this modification does not create an unreviewed safety question.

CE-60131

Description
This minor modification replaces MW10 with Racon Md 16004. The existing model is no longer available.

Evaluation
This modification is considered Safeguards Information and therefore a detailed evaluation is not included in this report. However, a detailed 50.59 was completed for this modification that concluded that a unreviewed safety question does not exist and is included with the original of the modification package.

CE-60132

Description

This minor modification removes notation showing connection to instrument ground and is considered an editorial change only.

Evaluation
This modification is considered Safeguards Information and therefore a detailed evaluation is not included in this report. However, a detailed 50.59 was completed for this modification that concluded that a unreviewed safety question does not exist and is included with the original of the modification package.

CE-60139

Description
This minor modification revises CNS-1390.01-00-0098, "Specification for Installation and Repairing of Cable Penetration Firestops" to delete the maximum allowable density of Dow Corning 3-6548 RTV Silicone Foam.

Evaluation
During mixing of the foam components, air is entrained in the product. It is essential that to the fire resistance characteristics of the foam that the amount of entrained air not be excessive. As the foam becomes more dense, less entrained air, the fire resistance characteristics re improved; however, more foam is required to fill a penetration. The removal of the maximum foam density from the specification will not adversely impact the existing design or operation of the foam to perform it's intended function as a fire rated penetration seal. Therefore this modification does not create an unreviewed safety question.

CE-60148

Description
This minor modification makes editorial changes to Design Basis Document(DBD) CNS-1435.00-00-0002, "DBD For Post Fire Safe Shutdown".

Evaluation
This revision corrects the DBD to agree with the referenced documents with respect to the Train associated with Fire Protection Areas 5 & 6 and will not adversely affect any structure, system or component important to the safe operation of the plant. Therefore this modification does not create an unreviewed safety question.

CE-60155

Description
This minor modification revises drawings to add an option for the installation of Lifeline Anchors on the exterior of the Reactor Building Concrete Domes.

Evaluation
These anchors may be used to support work on the Reactor Domes that require the use of personnel fall protection measures. The anchors have been designed for a load of 5,000 pounds to meet OSHA requirements. The option will not allow the cutting of reinforcing rebar associated with the Reactor Domes. The option of for installation of these anchors will not adversely impact any Structure, System, or Component required for the safe operation of the plant. Therefore this modification does not create an unreviewed safety question.

SUMMARY OF SELECTED LIECNSEE COMMITMENTS RELATED 10 CFR 50.59 EVALUATIONS

SLC 16.9-6

Description

This change accomplished the following: 1) changed the testing requirements for smoke detection instruments accessible during plant operation to a visual inspection at least once per six months and a trip actuating devive operational test at least once per year, 2) deleted the requirements for fire detection instruments in the Unit 1 and 2 UHI Buildings, and 3) deleted the requirements for eight heat detectors in the East and West Sections of the RN Pump Structure.

Evaluation

The evaluation sections are keyed to the numbered sections above:

1) This change restored the proper testing requirements for smoke detection instruments accessible during plant operation. These testing requirements were inadvertently changed under a revision to this SLC which was issued March 5, 1992. This previous revision contained a typographical error which improperly altered the testing requirements. This change ensured that the appropriate testing requirements are included within this SLC. No actions were taken under the revised testing requirements which were issued on March 5, 1992. Therefore, this earlier change had no impact on the testing of these smoke detectors.

2) This change deleted the requirements for testing the fire detection instruments within the UHI Buildings. The equipment within the UHI Buildings was removed from service and deleted from Technical Specifications. The requirement for testing these instruments should have been deleted when the Technical Specification amendments were approved. There is no need for this requirement in the SLC since the SLC is intended to provide fire detection capability in those areas where safety related equipment could be damaged.

3) This change deleted the requirements for eight heat detectors in the East and West Sections of the RN Pump Structure. The deletion of these heat detectors will not degrade the fire detection capabilities in the RN Pump Structure since this area contains smoke detectors. The NFPA Standards do not require two different types of fire detectors to be installed at each fire detector location. Therefore, this change does not represent a change to any commitment or requirement concerning fire detection capability.

SLC 16.7-1

Description

This change added a commitment to maintain the AMSAC (ATWS Mitigation System Actuation Circuitry) System operable in Mode 1 above 40% of Rated Thermal Power.

Evaluation

This change will increase the attention placed on maintaining the AMSAC System in a reliable condition and can only increase the margin of safety provided by this system. No unreviewed safety question was generated as a result of this change.

SLC 16.11-2, 16.11-7

Description
Changes to the SLCs were made as a result of modifications which removed EMF34 from the list of liquid effluent monitors in SLC 16.11-2 and added requirements to SLC 16.11-2 concerning EMF33. As a result of the modifications, EMF33 will be used to continuously monitor S/G tube leaks. The control functions of EMF34 (isolation of certain BB and NM valves) were transferred to EMF33. EMF34 was removed from continuous on-line status and placed in a "wet layup" configuration. Once a S/G tube leak has been detected and the faulted S/G has been identified, EMF34 may be used to trend the S/G tube leak.

Evaluation
Neither EMF is used to maintain any phase of either power generation or conversion, shutdown cooling, fuel handling, or radwaste treatment. Plant operations are not adversely affected by the modifications. No system used for any of the above functions is adversely affected by the changes. No system used to mitigate any accident is affected by the changes. The ability to detect either a S/G tube leak or a limiting case SGTR is not adversely affected by the changes. The ability and availability of EMF34 to trend either a tube leak or a SGTR is not adversely affected. No fission product barrier is adversely affected. No unreviewed safety question was generated.

SLC 16.9-4

Description
This change was made to allow for the removal and reracking of accessible interior fire hoses to be conducted on a 36-month frequency as opposed to the previous 18-month frequency. Fire hose that is not accessible during plant operations (inside the Reactor Buildings) will continue to be inspected and reracked on an 18-month frequency.

Evaluation
The intent of the applicable NFPA reracking requirement is to ensure that the fire hose will perform when needed. Based on the type of fire hose used at Catawba, information provided by the vendor, previous hydrostatic testing results, increased inspections for physical damage and the arrangement of the hose storage, the change from an 18-month to 36-month reracking procedure will not degrade the expected performance of the fire hose used at Catawba; therefore, the intent of the NFPA requirement is satisfied.

SLC 16.11

Description
These changes were made to the radiological effluents control SLC as a result of implementation of the new 10CFR20 requirements. Changes included nomenclature, concentration limits for noble gases, rewording of the Bases section to reflect the new Part 20, changes to concentrations, and references to new Part 20 sections.

Evaluation
Compliance with the new limits in 10CFR20.1301 will be demonstrated by operating within the limits of 10CFR50, Appendix I and 40CFR190. The dose rates and corresponding release limits will not affect plant equipment or systems. All changes will not affect any safety systems or any safety evaluations that have been previously included in the FSAR. The margin of safety as defined in Technical Specifications will not be reduced by these changes. Liquid and gaseous release limits and corresponding dose limits arising from the new 10CFR20 changes will not have any adverse effects on safety related systems or equipment in the plant.

SLC 16.11-7

Description
The source check for certain EMFs in Table 16.11-6 was changed to specify use of a light emitting diode (LED).

Evaluation
Utilizing the LED instead of the previous source check method checks all functional aspects of the EMFs for which failures are credible. No unreviewed safety question was generated as a result of this change.

SLC 16.11-7

Description
The source check for EMF58 was changed from a light emitting diode (LED) to Chlorine-36. In Table 16.11-6, reference to a note specifying a LED under "Source Check" for EMF58 was deleted. The previous reference to a LED was in error.

Evaluation
EMF58 is equipped with a 0.5 microcurie Chlorine-36 checksource. EMF58 should therefore conform to the definition of source check as found in Technical Specifications Definition 1.34 which states "A SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to a source of increased radioactivity". The change removed the note specifying the definition stated in SLC 16.11-7, so that the definition in Technical Specifications will apply. The affected monitor is a non-QA condition instrument, and is not required for safe shutdown of the plant. This monitor is provided to monitor the release of radioactive material in the Monitor Tank Building HVAC. Using the Chlorine-36 source will not change the sensitivity of the detector nor will it change the alarm/trip setpoint of the monitor. Thus, the monitor's ability to meet its design basis will be preserved.

SUMMARY OF COMPENSATORY ACTION RELATED 10 CFR 50.59 EVALUATIONS

Degraded Reactor Coolant Pump Seal 2D

Description

This compensatory action and associated temporary station modification increased the NC pump 2D #1 seal leakoff setpoint from 4.5 gpm to 6.5 gpm and established a leakoff limit of 7.0 gpm for continuous NC pump operation. NC pump 2D #1 seal leakoff flow had been trending upward. At the time of this compensatory action, NC pump 2D leakoff flow was above the 4.5 gpm setpoint. Therefore, a new setpoint was established to alert operators to increasing #1 seal leakoff flow. (This 10CFR50.59 evaluation was performed twice; once on 10/22/92 and once on 11/12/92.)

Evaluation

Under normal operation, with a #1 seal leakoff flow of 7.0 gpm, normal seal injection is sufficient to maintain adequate seal temperatures. If seal injection is lost, with a #1 seal leakoff flow of 7.0 gpm, adequate seal temperatures could be maintained by flow from the NC system via the thermal barrier. If both seal injection and KC flow to the thermal barrier are lost, with a #1 seal leakoff flow of 7.0 gpm, seal injection via SSF pump could be established within 7.5 minutes, thus providing acceptable flow to the NC pumps such that adequate seal temperatures are maintained. Therefore, with a #1 seal leakoff flow of 7.0 gpm, adequate flow to the NC pumps seal is ensured and adequate seal temperature is maintained.

Modification and/or Repairs of Control Room Pressure Boundary

Description

This compensatory action is used for the repair of any control room door, fire barrier, modifications which require penetration of a control room fire barrier, modification which requires drilling a new penetration in the control room, or a modification which requires holding a control room door open to allow temporary ventilation hoses and/or cabling to pass into the control room.

Evaluation

Neither the Control Room Ventilation System nor the Control Room Pressure Boundary are identified as an accident initiator. The compensatory actions which were identified for the above activities will ensure that operator doses during any of the design basis events will not increase above GDC 19 limits. Doses will not increase above current FSAR values if credit is taken for current ILRT test results. A degraded control room pressure boundary does not affect any of the accident initiators described in the FSAR. A degraded control room pressure boundary does not affect any of the system support functions of VC.

Steam Generator PORVs 2SV1 and 2SV13

Description

Because of erratic stroke times, 2SV1 and 2SV13 could not be guaranteed to meet the required isolation time. A TSM was implemented to ensure the valves were secured closed in such a manner that no single failure could cause the valves to spuriously open, thus satisfying the containment isolation requirement of Technical Specifications. The safety grade nitrogen supply was left intact, thus the valves were operable so that in the event of a SGTR or any other event requiring the use of either of these two S/G PORVs to cool down, multiple deliberate operator actions would have been required to open the valves.

Evaluation

The TSM did not add any new wiring or devices, so no new failure modes of the PORVs were created. The PORVs were still available to cool the unit down to the point of initiating RHRS operation in the event the steam dumps were not available. The TSM removed the automatic pressure control feature from 2SV1 and 2SV13. This feature was still available on 2SV7 and 2SV19, thus minimizing potential challenges to code safety valves. The TSM was designed so that no single failure of any component could cause either 2SV1 or 2SV13 to spuriously open for any design event or design basis accident. The valves were secured in their fail-safe position by removing power to solenoids, isolating air supplies, or tagging components in certain positions. No new failure modes were created by this TSM for either the PORVs, their associated air supplies, nitrogen supplies, or power supplies.

Steam Generator PORV 1SV13

Description
This compensatory action is similar to the preceding one for 2SV1 and 2SV13. A TSM was initiated so that 1SV13 may only be operated in manual mode. The valve is required to be opened to cool down and initiate RHR as directed by the EPs and APs and to assist the code safety valves in an event in which they fail to reseat.

Evaluation
Refer to the preceding evaluation for 2SV1 and 2SV13.

Steam Generator PORV 1SV19

Description
This compensatory action is similar to the preceding one for 2SV1 and 2SV13. A TSM was initiated so that 1SV19 may only be operated in manual mode. The valve is required to be opened to cool down and initiate RHR as directed by the EPs and APs and to assist the code safety valves in an event in which they fail to reseat.

Evaluation
Refer to the preceding evaluation for 2SV1 and 2SV13.

Turbine Building Sump Pump

Description
To prevent overflow of either the Unit 1 or Unit 2 Turbine Building Sump while one or more of the Turbine Building Sump Pumps were out of service, portable pumps were necessary. Discharge from the Turbine Building Sump Pumps is interlocked with the high radiation signal from EMF31 to ensure termination of discharge on that signal. Use of the portable pumps alone did not permit credit to be taken for automatic discharge termination required by SLC 16.11-2 for EMF31. This compensatory action provided for equivalent protection for release from the sump.

Evaluation
Use of this compensatory action to terminate WP sump discharge from portable pumps within 15 minutes of a high radiation alarm did not increase the probability or consequences of previously evaluated accidents. EMF31 termination of discharge on high radiation from the WP sumps is not relied upon to mitigate any accidents. As the discharge from the turbine building sumps was routed to the WC system, where it was held up prior to release to the unrestricted area, the possibility of creating an accident other than already evaluated did not exist. Discharge from the WP sumps without automatic termination is incapable of increasing the probability of a malfunction of equipment important to safety as the equipment involved is not safety related. For this reason and the lack of proximity or interdependence on any safety related equipment, the possibility of malfunctions of

equipment important to safety different than any already evaluated was not created. The compensatory action provided for tripping the sump pumps prior to exceeding the limits of 10CFR20 at the effluent outfall to the unrestricted area. This ensured that safety margins were not reduced.

Both Trains of VC/YC Out of Service

Description
On 1/11/93, Train B of VC/YC was declared inoperable due to its chiller being out of service. In this condition, if Train A were to have failed, there would have been no cooling to the control room. This compensatory action provided instructions on how to improve temperature control in the event that Train A failed.

Evaluation
The actions specified in this compensatory action did not adversely affect any accident initiators as described in the FSAR. These actions did not adversely affect the operation of equipment assumed to function in the event of an accident. The steps to deenergize the pressurizing filter train heaters if an air handling unit was operating did not adversely affect the operation of the filter units because the carbon is tested to 95% relative humidity. The instructions for holding open control room doors did not create or increase the probability or possibility of an accident as this was to be done under existing approved station compensatory actions. The temporary cooling equipment was not a seismic concern as fans and/or portable coolers were to be located at an adequate distance away from any safety related equipment. These actions provided additional contingency measures to what is assumed in the FSAR.

Maintenance Access into ND Pump Room through Auxiliary Building Hatch

Description
In order to prestage equipment in the Unit 2 ND pump room before an outage, it was necessary to remove a hatch in the ceiling of the pump room. Since the hatch (between the 543' elevation of the auxiliary building and the ND pump room) acts as a fire barrier, a radiation protection access barrier, a VA system pressure boundary, and an environmental qualification zone barrier, compensatory actions were needed to ensure this function was satisfied while the hatch was removed.

Evaluation
Adequate controls were placed in the compensatory action to ensure that the hatch is replaced within ten minutes of a safety injection. Replacing the hatch ensures that control room operator dose and offsite dose is kept below 10CFR50 and 10CFR100 limits and also that EQ requirements for equipment in the auxiliary building are maintained. The time limit ensures that, assuming maximum ECCS and NS pump flows and the FWST at its minimum level, the hatch is replaced prior to initiating containment sump recirculation. Removing this hatch did not introduce any new failure modes for any of the equipment in the ND pump room or in the area around the hatch.

Train B RN ISI Hydro

Description
These compensatory actions were to remove power from valves 1RN53B, 1RN48B, 1RN37B, and 2RN47A after they were closed. Also, valve 1RFA56 was to be closed within 10 minutes of the control room becoming aware of a fire. The objective of these compensatory actions was to ensure Train A RN remained operable throughout the test and that the RF system was available to mitigate a design basis fire event. Train B RN was inoperable during the test because of some gagged closed relief valves and because of the connectivity of the plastic piping used for pressurizing the RN system.

Evaluation
No new failure modes were created on SSCs relied upon to mitigate design basis accidents. The hydro did not degrade Train A of RN as evidenced by the isolation of those valves that interface between Train A and B RN. In addition, the compensatory actions removed power from these valves, eliminating the possibility of the valves changing position until the compensatory actions were cleared. These compensatory actions did not affect any fission product barriers. RN's ultimate heat sink safety function was not degraded outside the bounds of the existing technical specifications.

Maintenance Access into Unit 1/2 ND Pump Rooms

Description
The compensatory action addresses that it is periodically necessary to move equipment into (or out of) the ND Pump room through the hatch in the ceiling of the pump room.

Evaluation
With compensatory action in place, equivalent protection for the design purposes of the hatch will be ensured. The hatch is not an accident initiator. The compensatory action ensures that the hatch is reinstalled within 2 hours of initiation of a cooldown on the opposite unit to ensure that the effects of a postulated pipe rupture are consistent with design assumptions. Removing this hatch does not introduce any new failure modes for any of the equipment in the ND pump room. Equipment qualification requirements for the equipment in the Auxiliary Building will be maintained. Therefore this compensatory action does not create an unreviewed safety question.

Provide Refueling Integrity for Pen M-303

Description
The compensatory action deals with a test plug installed under a Temporary Station Modification into the A train Containment Sump Suction Line during Mode 6 unit operation. The compensatory action provides instructions for an operator to monitor test plug seal pressure and to notify the control room upon evidence of seal degradation so that valve 2NI-185A may be closed to ensure that containment closure is maintained.

Evaluation
The refueling cavity is filled during Mode 6 operation and therefore sump recirc is not required upon loss of core cooling. The test plug need only be maintained to provide a physical barrier to air flow outside containment. Since neither the piping or the valve on penetration M-303 are accident initiators the probability of an accident is not increased. This compensatory action requires an operator to monitor the test plug seal pressure to ensure that degradation is detected so that containment closures is maintained. Therefore no new failure modes are created by this compensatory action and it does not create an unreviewed safety question.

Maintenance Access to Unit 1 and Unit 2 NS Pump Rooms

Description
The compensatory action addresses that is periodically necessary to move equipment into (or out of) the NS Pump room through the hatch in the ceiling of the pump room.

Evaluation
With compensatory action in place, equivalent protection for the design purposes of the hatch will be ensured. The hatch is not an accident initiator. The compensatory action ensures that the hatch is reinstalled within 2 hours of initiation of a cooldown on the opposite unit to ensure that the effects of a postulated pipe rupture are consistent

with design assumptions. Removing this hatch does not introduce any new failure modes for any of the equipment in the ND pump room. Equipment qualification requirements for the equipment in the Auxiliary Building will be maintained. Therefore this compensatory action does not create an unreviewed safety question.

Associated with "A" Train RN ISI Hydro

Description
This compensatory action provides guidance to manually close fire protection valve 1RFA56 which was being used to provide hydro pressure for testing of RN piping. Isolating RF to RN is necessary to ensure integrity of the fire protection system in the event of a fire.

Evaluation
The hydro static test will nor create any new failure modes on the RN train and this compensatory action will prevent any spurious failures caused. The interconnection of the RF and RN lines will not affect operability of the B train RN header since the RN header is isolated during this evolution by valves 1RN47A and 2RN47A. The RN system is not an initiator of any accidents evaluated in the FSAR and no new failure mods are created on SSCs relied upon to mitigate DBA or design accidents. Therefore this compensatory action does not create an unreviewed safety question.

Maintaining KC Train 2A Availability While Throttling KC Flow to ND Hx 2A.

Description
The compensatory action ensures that KC will be available to support ND in this configuration. Both trains of ND are required for draining the reactor cavity below 23 feet. This compensatory action allows throttling of KC flow to the ND Hx 2A so that additional KC pump data may be obtained. The action required is to provide a means to restore A Train KC to available status via operator action in the event that B Train KC/.ND were to fail during the duration of the testing on A Train KC.

Evaluation
With this compensatory action in place, a means is available to restore KC Train 2A to available status via operator action to support operation of A Train ND in the event of a B Train KC failure. The required action time is 15 minutes, this is a conservative limit for restoring the minimum flow required in the event of loss of the B train KC/ND to maintain adequate core cooling. The actual time to boiling is 45 minutes. No new accident scenarios are created. Therefore this compensatory action does not create an unreviewed safety question.

Maintaining KC Train 2A Availability With Only KC Pump 2A2 In Operation

Description
KC Pump 2A1 is operating erratically while in Mode 6 or 5 during 2EOC5 refueling. This compensatory action provides guidance to ensure the availability of 2A KC train with a single A Train pump.

Evaluation
Isolation of KC trains from each other does not increase the probability of an accident. This compensatory action assures the ability of the KC System to supply all required loads. The alignment required by this compensatory action is the post-accident alignment. Redundant design of the KC system is not compromised. Therefore this compensatory action does not create an unreviewed safety question.

Guidelines for Fire Boundary Hatch

Description
This compensatory allows opening of a fire barrier hatch plug on 560' elevation at AA-BB by providing instructions for immediately closing the hatch upon hearing the safety injection/rx trip or upon leaving the area.

Evaluation
The hatch plugs are not accident initiators. No hatch plugs are removed under this compensatory action that require quick response (less than 30 min). The compensatory actio n provides instructions to reinstall the hatch and therefore will not create any new accident. The hatch plugs will be reinstalled prior to affecting any accident analyzed. Therefore this compensatory action does not create an unreviewed safety question.

Removal of Hatch For Access to Safety Injection Pump 2A For Motor Replacement

Description
Due to failure of the Safety Injection Pump 2A Motor it is necessary to replace the motor. In order to accomplish this it will be necessary to remove the hatch over the motor, a section of Auxiliary Building Ventilation Ductwork over the motor.

Evaluation
This hatch is not an accident initiator. Unit 2 will be in Modes 5, 6 or No Mode, therefore control room does is not an issue and EQ requirements are maintained. The compensatory action requires that the hatch must be reinstalled prior to entering Mode 4. Therefore this compensatory action does not create an unreviewed safety question.

Access Through 2B NI Pump Room Door (AX232)

Description
To allow decon the 2B Safety Injection Pump room it is necessary to leave door AX232 open to bring in equipment. This compensatory action provides instructions to close this door upon notification by the Shift Supervisor.

Evaluation
This door nor any equipment in the NI Pump room are accident initiators. This compensatory action provides instructions to ensure that the door is closed with in 10 minutes of a safety injection signal. This time limit ensures that the door is closed prior to initiating containment sump recirculation, which is the earliest time that contaminated water would be present in the NI Pump. Therefore this compensatory action does not create an unreviewed safety question.

Auxiliary Building Hatch 560 FF-55

Description
This compensatory action allows removal of this hatch by establishing a fire watch in accordance with SD 2.12.7.

Evaluation
As long as the fire watch is performed equivalent fire protection is provided. Therefore this compensatory action does not represent an unreviewed safety question.

Temporary Removal Of Hatches to Provide Maintenance Access into Fuel Building Through Auxiliary Building

Description
This compensatory action allows removal of hatches between the Auxiliary Building and the Spent Fuel Pool building by providing instructions to immediately close the hatches and leave the area when notified by the Shift Supervisor.

Evaluation
These hatches nor any equipment in the areas around the hatches are not accident initiators. Nor are the required for accident mitigation (other than a fuel handling accident and the compensatory action has adequate controls in it to ensure no fuel handling is in progress while the hatches are out). Therefore this compensatory action does not create an unreviewed safety question.

Temporary Removal of FWST Pipe Trench Covers

Description
It is periodically necessary to remove the FWST Pipe Trench Covers in order to enter the pipe trench to perform maintenance or inspections. This compensatory action provides instructions to replace the covers within 1 hour of issuance on a Tornado Watch/Warning or immediately upon announcement of a Safety Injection or Rx trip.

Evaluation
With this compensatory action in place, equivalent protection for the design purposes of these covers is ensured. Tornado missile and Turbine missile protection is ensured and Security control of the area is ensured. The Equipment Qualification function of these covers is also ensured. These covers are not accident initiators. The instructions provided ensure that the protective functions of these covers are maintained. Therefore this compensatory action does not create an unreviewed safety question.

RN Piping Protection Against Tornado Missile Protection while Implementing Commodities/Facilities Warehouse and Vehicle Maintenance Facility Installation

Description
Buried RN piping must be protected from a tornado generated missile during the installation of the Warehouse and Vehicle Maintenance Facility. This is normally accomplished by providing a minimum earth cover of 5 feet (reference calculation CNC-1150.00-00-0001). This compensatory action provides instructions to replace dirt within 1 hour following notification of a tornado watch/warning.

Evaluation
This compensatory action will ensure that this minimum required cover is established within one hour of a tornado watch/warning. The piping associated with this compensatory action is not an accident initiator. The controls established by this instruction ensure that the RN piping will be protected against tornado generated missiles so that the ability of the RN system to full fill its required function is not degraded.

Pressure Bleed for NI Discharge Header Due to Leaking NI Cold Leg Discharge Check Valve(s) By Aligning a Flow Path Through 1NI-96B To The Waste Evaporator Feed Tank Sump A - 6/23/93

Description
Due to NC system leakage past the NI Cold Leg discharge check valve(s), it is necessary to bleed NC system pressure from the NI discharge header until the differential pressure across the check valve(s) is sufficient enough to stop the leakage. This usually occurs around 2200 psig NC system pressure based on past experience. This compensatory action provides instruction to close three NI system valves that may be open to reduce NI header pressure.

Evaluation
With this compensatory action in place, NC system pressure can be bled from the NI discharge header in a controlled manner. This will prevent degrading the ECCS flow balance requirements. It will also prevent the NC system pressure from lifting relief valves 1NI119 and /or 1NI151 and potentially draining the FWST or inadvertently cycling ND boundary valves. The configuration used will limit leakage to 0.1 gpm by throttling 1NI 208. This is expected to limit NI Header pressure below the relief valve setpoint. The safety significance of the installation of this drain valve is discussed under the minor modification 50.59. The minor losses of NC inventory and NI flow will not reduce the margin of safety as defined in the basis to any Technical Specification. Therefore this compensatory action does not create an unreviewed safety question.

Pressure Bleed for NI Discharge Header Due to Leaking NI Cold Leg Discharge Check Valve(s) By Aligning a flow path through 1NI-120B to The FWST - 6/24/93

Description
Due to NC system leakage past the NI Cold Leg discharge check valve(s), it is necessary to provide a continuous bleed path for NC system pressure from the NI discharge header. The actions performed under the 6/23/93 compensatory action reduced leakage but was not sufficient to prevent gradual a increase in header pressure. This compensatory action will throttle valve 1NI208 to allow a maximum continual leakage of 0.1 gpm. This compensatory action provides instructions to close 1NI-208 in the event of NC LOCA prior to Sump Recirculation.

Evaluation
With this compensatory action in place, NC system pressure can be bled from the NI discharge header in a controlled manner. This will prevent degrading the ECCS flow balance requirements. The configuration used will limit leakage to 0.1 gpm by throttling 1NI 208. This is insignificant relative to the nominal 450 gpm ECCS flow rate. The minor losses of NC inventory and NI flow will not reduce the margin of safety as defined in the basis to any Technical Specification. Therefore this compensatory action does not create an unreviewed safety question.

Pressure Bleed for NI Discharge Header Due to Leaking NI Cold Leg Discharge Check Valve(s) By Aligning a flow path through 1NI-482 added per Minor Mod CE-4163 to a floor drain. - 7/1/93

Description
Due to NC system leakage past the NI Cold Leg discharge check valve(s), it is necessary to provide a continuous bleed path for NC system pressure from the NI discharge header. This will be accomplished by throttling valve 1NI-482 to allow a maximum leakage of 0.14 gpm. This compensatory action provides recommends to close 1NI-210 in the event of NC LOCA prior to Sump Recirculation to minimize exposure in the Auxiliary Building.

Evaluation
With this compensatory action in place, NC system pressure can be bled from the NI discharge header in a controlled manner. This will prevent degrading the ECCS flow balance requirements. The configuration used will limit leakage to 0.14 gpm by throttling 1NI-482. This is insignificant relative to the nominal 450 gpm ECCS flow rate. The minor losses of NC inventory and NI flow will not reduce the margin of safety as defined in the basis to any Technical Specification. Therefore this compensatory action does not create an unreviewed safety question.

Pressure Bleed for NI Discharge Header Due to Leaking NI Cold Leg Discharge Check Valve(s) By Aligning a flow path through 1NI-208 to a floor drain - 8/17/93

Description
Due to NC system leakage past the NI Cold Leg discharge check valve(s), it is necessary to provide a continuous bleed path for NC system pressure from the NI discharge header. This will be accomplished by throttling valve 1NI208 to allow a maximum leakage of 0.14 gpm. This compensatory action recommends closing 1NI-208 in the event of NC LOCA prior to Sump Recirculation to minimize exposure in the Auxiliary Building.

Evaluation
With this compensatory action in place, NC system pressure can be bled from the NI discharge header in a controlled manner. This will prevent degrading the ECCS flow balance requirements. This is also less than the allowable 10 gpm Tech Spec value for NC leakage. The configuration used will limit leakage to 0.14 gpm by throttling 1NI 208. This is expected to limit NI Header pressure below the relief valve setpoint. The minor losses of NC inventory and NI flow will not reduce the margin of safety as defined in the basis to any Technical Specification. Therefore this compensatory action does not create an unreviewed safety question.

Unit 1 Annulus Fire Protection Systems Isolation

Description
This compensatory action provides guidance to allow temporary isolation of the Unit 1 Annulus Fire Protection System so that drain valve 1RF979 can be replaced.

Evaluation
Selected Licensee Commitment 16.9-2 requires that backup fire suppression equipment be provided within one hour after the Annulus fire protection system has been removed from service. This compensatory action requires that additional specific fire protection equipment be in place prior to isolating. Upon receipt of an alarm the continuous fire watch at the annulus fire detection control panel will immediately contact the control room so that the fire brigade can respond. Therefore this compensatory action does not create an unreviewed safety question.

Control Room Pressurization

Description
Various plant activities may have an adverse effect on the ability to pressurize the control room and in fact may render the system inoperable under the most limiting operating condition for Control Room Ventilation (VC) with only one intake open. These compensatory action instructions may be used for the repair of any control room door, fire barrier, modifications which require penetration of a control room fire barrier, modification which requires drilling a new penetration in the control room, or a modification which requires holding a control room door open to allow temporary ventilation hoses and/or cabling to pass into the control room.

Evaluation
With this compensatory action in place Control Room Operator doses will remain within GDC 19 limits. Tornado protection is restored well within time frames normally allowed for Tornado Compensatory Action (Typically one hour). Therefore this compensatory action does not create an unreviewed safety question.

Reactor Building Penetration Disassembly

Description
It is periodically necessary during outages to disassembly Reactor Building penetrations between the Auxiliary Building and the Annulus for temporary cables, hoses, etc. These penetrations provide protection for certain

design basis events to the shared Auxiliary Building as a result of other activities which take place during outages. These activities consist primarily of removal of the equipment hatch shield door and removal of portions of the boot seal. Therefore, compensatory actions are required to ensure that protection for these design basis events is maintained for the operating unit.

Evaluation
With this compensatory action in place, equivalent protection for the design purposes of these penetrations is ensured. tornado overpressure protection for the Auxiliary Building will be ensured. security control of the area will be ensured if required. Equivalent fire protection is ensured by establishment of a fire watch in accordance with Site Directive 2.12.7. Therefore this compensatory action does not create an unreviewed safety question.

Operability Evaluation - 2C SG Loose Part

Description
The operability evaluation addresses the effects of leaving a loose part (machine turning) in the secondary side of the 2C Steam Generator.

Evaluation
Based upon the evaluations presented in this document, leaving the turning in the secondary side of the steam generator will not impact the protective boundaries of the S/G. All parts of the 50.59 safety evaluation are satisfied, and this evaluation does not an create an unreviewed safety question.

SUMMARY OF TEMPORARY STATION MODIFICATION
RELATED 10 CFR 50.59 EVALUATIONS

TSM 92092731-01

Description
This TSM eliminated the orifice plate and flanges for 1NMFE5030 by cutting and rewelding new pipe at welds 1NM09-7 and 1NM101-3. It also removed root valves and expansion coils, capped the high pressure and low pressure tap input lines, opened sliding links on 1EATC5, and removed the computer points from service. This TSM was performed because the orifice flange joint has been leak repaired numerous times and was still leaking. Past attempts at replacing gaskets and bolts, cutting, and machining have failed to eliminate this problem.

Evaluation
This TSM did not adversely affect the NM system. The elimination of the orifice plate and flanges and the substitution of piping will satisfy the original design specifications and codes. The inability of 1NMFE5030 to perform its intended function had no effect on the system since the instrument was already disabled. The comparison circuit has not worked properly and was deemed to be unnecessary. It is aligned with non-1E power sources and does not perform an accident mitigation function. Valve 1NM26B does close on a Phase A containment isolation signal. Its ability to do so was not adversely affected ny this TSM. These components were already targeted for removal by design per NSM 11278.

TSM 93005508-01

Description
This TSM changed timers in the turbine control system electrical trip test logic. The electrical trip test is an automatic test initiated by the control room operator to verify the electrical trip valve and circuitry. The test bypasses the trip function and sequentially (timed) steps through energizing the electrical trip valve, verifying trip action, and then resets the ETV and verifies reset action. CN1LHPS5160 is used as an input to this test. For an undetermined reason, 1LHPS5160 was slow to reset and the test halted on a time out. The 10-second timer controls when the next test step will start and the 8-second timer is the time allowed for the previous test step to complete. This TSM changed the timers from 8 seconds and 10 seconds to 80 seconds and 90 seconds. These new times should provide enough time for 1LHPS5160 to reset.

Evaluation
This TSM did not affect systems or components addressed in the FSAR in a significant manner. The test logic is not safety related and the trip function has been independently verified to be working correctly. The timers only affect the reset function of the test logic.

TSMs 93005157-01 (Unit 1) and 93005178-01 (Unit 2)

Description
These TSMs disabled the excess flow check valve status indication inputs to 1/2RFM80 from the status indication terminal boxes 1/2TBOX0503 and 1/2TBOX0504 so that the control room annunciators 1/2AD04.04.08, Excess Flow Check Valve Status Light Panel Trouble, will extinguish.

Evaluation
These TSMs did not revise the systems' function as stated in the FSAR or technical specifications. No other change was made other than placing two electrical jumpers on 1/2RFM80 to disable the two status indication inputs; nevertheless, 1/2AD04.04.08 would still alarm if a power failure in 1/2SIC4 were to occur. No automatic action or safety related functions were affected. Indication of excess flow check valve status was still available at the status panel 1/2SIC4, and was checked by Operations once per shift for the duration of the TSMs.

TSMs 93055288-01 (Unit 1) and 93055290-01 and 93055291-01 (Unit 2)

Description
These TSMs involved placing a jumper in an annunciator circuit to quiet the alarm for RN motor high air temperature. The air temperature alarm setpoint was too low.

Evaluation
These TSMs had no effect on RN system operation. Motor operation is based on stator temperature, which is monitored on the Operator Aid Computer. These TSMs only affected the air temperature alarm in the control room.

TSM 92085630-01

Description
The FSAR discusses processing of the floor drain tank waste stream through the FDT filters. These are disposable cartridge filters rated at 98% retention for 25 micron particle sizes. In order to pump unfiltered water/sludge slurry to the Waste Solidification Facility for solidification, this modification removed the filtering capability of one of the filters. This did not eliminate filtration from the process stream, as normal filtration of all letdown water could still occur in the Monitor Tank Building.

Evaluation
The FSAR accident analysis addresses a liquid waste stream leak or failure. This accident is based on a worst case scenario which would be the rupture of a recycle holdup tank. This is the highest potential atmospheric release source because of its activity level and volume. The FDT subsystem is totally separate from the analyzed accident system, therefore the probability of this accident was not increased. The consequences of a RHT rupture were not increased for the same reasons. The FDT filter is located in a filter bunker equipped with a floor drain leak detector. Should the housing leak, it can be quickly isolated and all leakage handled via the floor drain. This possibility exists on all filter housings, thus the possibility of a new accident was not created. The FDT filter housings are physically separated from safety related components and could not increase the probability or consequences of safety related equipment failures. The FDT filters are not technical specification related and do not affect safety related or technical specification equipment. Therefore, no safety margins were reduced.

TSM 93058956-01

Description
This TSM changed control for valve 1YM461 (YM Supply Pump Recirculation Valve) from 0YMFT5720 to 0YMPT5430. The Reverse Osmosis Skid was added to the YM system, causing a change in flow control for 1YM461 from its original design. This TSM will allow for better control of the flow of water from the YM Supply Pumps to the Reverse Osmosis Skid and prevent the YM Supply Pumps from deadheading. Also, this should reduce water hammer on the YM piping system.

Evaluation
Proper operation of the YM Supply Pumps was verified and proper pressure and flow was verified as maintained in piping controlled by 1YM461. No unreviewed safety question was generated as a result of this TSM.

TSM 93027838-01

Description
This TSM installed a Rexa Corporation X-Pac actuator/drive assembly on valve 2RC-31. The purpose was to monitor operation of the Rexa actuator on this application in order to evaluate for future use.

Description
These TSMs involved placing a jumper in an annunciator circuit to quiet the alarm for RN motor high air temperature. The air temperature alarm setpoint was too low.

Evaluation
These TSMs had no effect on RN system operation. Motor operation is based on stator temperature, which is monitored on the Operator Aid Computer. These TSMs only affected the air temperature alarm in the control room.

TSM 92085630-01

Description
The FSAR discusses processing of the floor drain tank waste stream through the FDT filters. These are disposable cartridge filters rated at 98% retention for 25 micron particle sizes. In order to pump unfiltered water/sludge slurry to the Waste Solidification Facility for solidification, this modification removed the filtering capability of one of the filters. This did not eliminate filtration from the process stream, as normal filtration of all letdown water could still occur in the Monitor Tank Building.

Evaluation
The FSAR accident analysis addresses a liquid waste stream leak or failure. This accident is based on a worst case scenario which would be the rupture of a recycle holdup tank. This is the highest potential atmospheric release source because of its activity level and volume. The FDT subsystem is totally separate from the analyzed accident system, therefore the probability of this accident was not increased. The consequences of a RHT rupture were not increased for the same reasons. The FDT filter is located in a filter bunker equipped with a floor drain leak detector. Should the housing leak, it can be quickly isolated and all leakage handled via the floor drain. This possibility exists on all filter housings, thus the possibility of a new accident was not created. The FDT filter housings are physically separated from safety related components and could not increase the probability or consequences of safety related equipment failures. The FDT filters are not technical specification related and do not affect safety related or technical specification equipment. Therefore, no safety margins were reduced.

TSM 93058956-01

Description
This TSM changed control for valve 1YM461 (YM Supply Pump Recirculation Valve) from 0YMFT5720 to 0YMPT5430. The Reverse Osmosis Skid was added to the YM system, causing a change in flow control for 1YM461 from its original design. This TSM will allow for better control of the flow of water from the YM Supply Pumps to the Reverse Osmosis Skid and prevent the YM Supply Pumps from deadheading. Also, this should reduce water hammer on the YM piping system.

Evaluation
Proper operation of the YM Supply Pumps was verified and proper pressure and flow was verified as maintained in piping controlled by 1YM461. No unreviewed safety question was generated as a result of this TSM.

TSM 93027838-01

Description
This TSM installed a Rexa Corporation X-Pac actuator/drive assembly on valve 2RC-31. The purpose was to monitor operation of the Rexa actuator on this application in order to evaluate for future use.

Evaluation
The actuator to be installed mounted in place of the existing actuator. The rated torque of the Rexa actuator is

Evaluation

The actuator to be installed mounted in place of the existing actuator. The rated torque of the Rexa actuator is more than adequate to operate the valve under load. No additional supports were required. The actuator is a self-contained unit and will not be affected by the corrosive environment of the valve location. The existing control signal cable was used to supply the control signal to the digital Position Control Processor (PCP). The PCP was supplied with the actuator and is included in a NEMA 4X enclosure for protection against the environment. The PCP was supplied with a 25 ft section of cable to connect the PCP to the actuator and was mounted near the valve. The actuator requires 120 VAC power, whereas the previous actuator operated from 575 VAC three phase power. A step-down transformer was installed within a weatherproof enclosure to step the voltage down to the required 120 VAC. The transformer is rated at 1.5 kVA. This is more than adequate for the actuator, which requires 0.84 kVA.

TSMs 92090124-01 (Unit 1) and 92090121-01 (Unit 2)

Description

In order to bypass the run indication for the CA to RN swapover for the turbine-driven CA pumps, jumpers were placed in 1/2AFWPTCP. It had been noted that the relays which energize to indicate that the pumps are operating were non-safety related and powered from non-Class 1E sources.

Evaluation

The likelihood of an event in which water from the RN system would be inadvertently pumped to the S/Gs during normal unit operations was not increased. The function of autoswap of the pumps to the RN system upon indication of unavailability of the normal source of water was not degraded by the modifications. The probability of an unnecessary autoswap was not increased. The performance of the CA system following an accident and a single failure of the pump was shown to not be degraded. The shunting of the contacts resulted in the bypassing of a timer associated with the circuit paths indicating that the pump is running. The timer in the circuit path for RN system alignment was not affected.

TSMs 92099859-01 and 93003060-01

Description

These TSMs were initiated to revise the Train A and B Control Room Chiller Head Pressure Controller setpoint from 110 psi to a range of 130 to 150 psi. This range will not affect the low evaporator refrigerant temperature trip of the chiller, and is below the 220 psi high condenser refrigerant pressure trip point. There is no requirement to maintain condenser head pressure at 110 psi. Due to the recent problems with refrigerant migration within the chiller, it was found that a condenser head pressure of 130 to 150 psi will improve operation of the chiller at the existing load conditions, coupled with the existing cold RN system water temperature. A higher condenser head pressure will ensure refrigerant level in the evaporator is adequate to prevent a low evaporator temperature trip of the chiller. A more stable flow of refrigerant within the chiller is maintained.

Evaluation

Under accident conditions, the heat load entering the evaporator will increase toward the 52.2 F chilled water temperature design value. In order to maintain the design 42 F leaving chilled water temperature, the condenser head pressure will increase. However, the head pressure controller will adjust the condenser water flow to control head pressure within the setting of the controller. The condenser is designed for a full flow of 1400 gpm. The condenser is also designed for an entering water temperature of 95 F, and a leaving water temperature of 105 F. Experience has shown that condenser entering water temperature will not reach 95 F, and entering water temperature during the season in which the TSMs were installed is much lower than this limit. Therefore, the chiller was able to operate within the design limits under the TSMs.

TSM 93034733-01

Description
This TSM installed QA-1 Bussman fuse P/N ABC-7, ID# 02841475C in the Monitor Light System Train B cabinet (1MLCB) power distribution panel until the correct fuse, Beta Products P/N 120019-22, can be installed. This TSM was necessary because the 250V, 7 amp fuse in the power distribution panel for 1MLCB blew during corrective maintenance and the correct fuse was not in stock at the time.

Evaluation
The Bussman fuse P/N ABC-7 is the same type of fuse as the Beta Products P/N 120019-22: 250V, 7 amp; therefore, the Bussman fuse has no effect on the Monitor Light System. The Bussman fuse has the same fit, form, and function as the Beta Products fuse.

TSM 92093623-01

Description
This TSM opened sliding link F-33 in 2AFWPTCP to deenergize 2SASV5020. This failed the CA pump turbine governor to the maximum speed setting and disabled the speed control potentiometers. This TSM was necessary because of the absence of a safety related signal to fail the governor to maximum speed on a Train B CA pump turbine autostart.

Evaluation
This TSM resulted in the loss of capability to adjust CA pump turbine speed below the maximum speed setting. No significant effect occurred because the design basis requires the CA pump turbine to operate at maximum speed.

TSMs 92099839-01 (Unit 1) and 92099840-01 (Unit 2)

Description
The purpose of these TSMs was to ensure that all S/G PORVs at Catawba were secured in the closed position so that no single failure could cause any valve to spuriously open. The modifications included the following: 1) Power was removed from the Train A and Train B solenoid valves which vent air from the bottom of the S/G PORV operator, 2) The air supply to the AFWPTCP manual loaders was isolated, 3) The manual/auto switch for each S/G PORV was white tagged in the auto position, and 4) The manual loaders for each S/G PORV were white tagged in the zero demand position.

Evaluation
The nitrogen supplies of each S/G PORV were not affected by the modifications. The modifications were such that if a SGTR or any other event requiring the use of the S/G PORVs were to occur, multiple deliberate operator actions would be required to open the valves. There was no change to any setpoint, operating parameter, or design limit. No fission product barrier was affected. No unreviewed safety question was determined to exist.

TSM 93059558-01

Description
This TSM removed automatic actuation capability from S/G PORV 2SV1. This allowed operation in Mode 1 while troubleshooting for slow stroke time on other valves.

Evaluation
A 10CFR50.59 evaluation was originally written for TSMs 92099839-01 and 92099840-01, which defeated the automatic control function for all Unit 1 and 2 PORVs. To help determine the cause of slow stroke times, new

TSMs were needed to block the auto signal for each valve, instead of blocking all four at the same time. This allowed each PORV to be tested individually, while maintaining operability of the other PORVs. The 10CFR50.59 evaluation for TSMs 92099839-01 and 92099840-01 (see preceding entry) is therefore also applicable to this TSM.

TSM 92098302-01

Description
This TSM allowed two electrical slide links to be opened to restore annunciator 1AD08.03.05 to service. The annunciator informs the control room operators of a cooling tower icing problem. The annunciator will energize on a high flume water level coupled with a low temperature sensed on either of the three cooling towers. The switch which monitors the flume level for cooling tower 1A had grounded, causing the fuse which powers the three temperature sensors for the associated tower to blow. As a result, the relays from the level and temperature sensors for cooling tower 1A were deenergized, which had the annunciator energized. The grounded switch could not be repaired until the cooling tower flume is drained during an outage situation.

Evaluation
The condenser circulating water (RC) system, of which this modification was a part, is not required to safely shut down the reactor, and therefore does not perform a safety function. This modification allowed the intended function of the annunciator to be restored until the faulty switch could be repaired. Installation of this modification did not affect the intended function of the system.

TSM 92095933-01

Description
The purpose of this TSM was to allow the testing of the RN pump pit B level instrumentation without automatically closing the cross-connect valves 1/2RN-47A or auto starting the operable RN pumps. The pit level instrumentation was tested to determine the effects between relay logic circuits when disconnecting the power from one of the two transmitters sharing common AC power sources. This testing was required to complete commitment items resulting from the inadvertent ESF actuation reported in LER 413/92-10.

Evaluation
In accordance with technical specifications, both A and B trains of RN were aligned to take suction from the standby nuclear service water pond. Due to the TSM, 1/2RN-47A and 47B could remain open, allowing cross-train supply for both the Unit 1 and Unit 2 Train A and B headers. Certain cross-over valves could have been closed and tagged to protect the running RN pump(s) from runout. For the duration of the TSM, D/Gs 1A and 1B and 2A and 2B were scheduled to remain operable. With both Unit 1 and 2 in Mode 1, a Sp signal on one unit would have closed the respective unit's cross-over valves, thus providing isolation for the unit essential headers as well as isolating the respective unit's non-essential header from both trains.

TSM 92095459-01

Description
Level transmitter 2CMLT5450 is used to measure full range hotwell level and provide a signal to chart recorder 2CSCR5840 and an analog computer point. There had been a problem with air inleakage through the standpipe arrangement due to condenser vacuum causing the level in the standpipe to be lost which resulted in a false low reading. A differential pressure measurement arrangement utilizing a reference leg had been proposed as an alternative to the existing instrumentation. In order to ensure the method would work, a test to ensure water loss from the reference leg would not result was needed. This TSM installed a section of tygon tubing to the tap on the top pipe connected to the standpipe for 2CMLT5450. It plugged the end of tubing and installed an isolation valve on the end connected to the pipe. Approximately one foot of water was added to the tubing. Then the

entire installation was ensured leak-free.

Evaluation
No safety related equipment was affected by this TSM. The tygon tubing was secured against the standpipe in a manner that prevented it from being accidently disengaged. No unreviewed safety question was generated as a result of this TSM.

TSM 93018822-01 (Unit 1) and 93018825-01 (Unit 2)

This TSM improves the ability of the Control Room Ventillation system (VC) to maintain proper control room pressurization by tieing open VC dampers 1 & 2 CR-D-9 with power removed.

Evaluation

Without the implementation of this TSM, if the opposite unit damper fails, the possibility of ooverpressurizing the control room exists and endangering personnel entering and exiting the control room. If the non-operating unit damper fails, the ability to pressurize the control room would be lost. This TSM does not significantly change the operation oof the VC system. Instead of having all of the recirculation flow comming from one train, it will be split between the two trains. Since the total amount of recirc flow will not change, the ability of the VC system to maintain control room at a positive pressure with respect to all adjacent areas will not be affected.

TSM 93064038-01 and TSM 93064038-01

This TSM installs welded pipe caps on the Nuclear Service Water system (RN) at the cooling water supply and discharge of Upper Containment Ventillation (VU) Units 1B and 1C (or 1A and 1C) for the purposes of isolation, while maintenance is performed. This allows VU units 1A and 1C (or 1B and 1C) to remain operable.

Evaluation

The VU system is not required by Technical Specifications. The purpose is to help maintain upper containment air temperature within the requirements of Technical specifications. During the time period that maintenence is being performed, the VU units 1A and 1B (or 1B and 1C) are sufficiant to maintain Upper Containment Air temperature in specification.

TSM 93037864-01

This TSM disables the low-speed winding control circuit for Lower Containment Ventillation unit 1A (LCVU-1A) fan motor. The low-speed winding has developed a short and is causing the breaker to trip. There are four LCVUs in containment, each is a 33% capacity unit. Three are normally in operation, with one in standby. With LCVU-1A incapable of functioning in low-speed, the remaining three units are capable of maintaining containment lower air temperature in specification. Should an additional unit fail, an attempt can be made to operate LCVU-1A in high-speed to prevent the lower containment air temperature from exceeding limits.

TSM 93028262-01 and 93028258-01

This TSM is to cause Control Room Annunciator "125 VDC Normal Aux Control Power Trouble" to be dark.

Evaluation

The annunciator is in alarm due to a ground on 125 VDC distribution panel CDA. The ground has been traced to the FWPT 1A control power and cannot be repaired with the FWPT running. With this annunciator in continuously, any new ground on positive or negative legs of CDA or CDB would not be detected. This TSM only defeats the negative-leg ground indications, therefore implementation of this TSM will enable this annunciator to display indication of a positive-leg ground, should one occure. No automatic actions or safety related functions are affected.

TSM 93020462-01

This TSM gags open 2RC-31 (Make-up Control Valve to Cooling Tower 2A) while the operator for this valve is repaired.

Evaluation

The RC system removes heat from steam exhausted from the main turbine and is not a safety related system and is not required for safe shutdown of the reactor, therefore this TSM does not have any significant impact on safety related systems or equipment.

TSM 93015246-01 (A Train) and 93100644-01 (B Train)

This TSM will modify the control circuit on the Nuclear Service Water system (RN) Pump Lube Injection Strainer Inlet Crossover Isolation Valve, 1RN-36A (or 1RN-37B), in order to prevent automatic closure on a safety injection signal. This valve will be used to establish an alternate flow path of cooling water to the Unit 1A (or 1B) Diesel Generator (D/G). This alternate flow path will allow the 1A (or 1B) D/G to be maintained available to operate if required, during the RN train A (or train B) return valve replacement.

Evaluation

This TSM will defeat of the Safety Injection signal (SS) from 1RN-36A (or 1RN-37B) to close to provide train separation during accident conditions. If the scenario occurs that will require the 1A (or 1B) D/G to operate with the 2B (or 2A) RN Pump supplying cooling to the 1A (or 1B) D/G by way of the operable B (or A) train supply header, a maximum flow of 1203 gpm will be diverted from the operable B (or A) train. To ensure this diverted flow does not rob flow from other B (or A) train components, the 1B (or 1A) D/G cooling water flow inlet valve (1RN-292B) (or 1RN-232A) will be manually closed when the 1A (or 1B) engine is started. This will ensure sufficient flow available for the 1A (or 1A) D/G without robbing flow from operable B (or A) train componnents.

TSM 93009002-01, 93008998-01, 93008985-01, and 93009005-01

This TSM allows installation of a local test gage to monitor the pressure of nitrogen as it is injected into the steam generators (S/Gs). The nitrogen injection is the normal alignment for each S/G during draining and various dyr layups during unit outage.

Evaluation

The installation of these gages will be done after the Main Steam (SM) system is depressurized and will be removed prior to pressurization of the SM system. With the SM system depressurized, the system components are not considered to be affected in any significant manner.

TSM 93007939-01

This TSM will defeat the non-emergency trip of D/G 2B due to High Crankcase pressure.

Evaluation

The High Crankcase pressure trip is a non-emergency trip and is bypassed on an automatic emergency start of the D/G. This trip was only active during a manual start of the D/G. A failed pressure transmitter is preventing the D/G from being manually run and there are no spares immediately available. This TSM will allow the manual operation of the D/G and there is crankcase pressure displayed on the D/G control panel that the operator can monitor during manual operation. The installation of thei TSM does not affect any safety related portion of the engine control system.

TSM 93007432-01

This TSM will allow the Containment Ventillation System (VP) to operate with power removed to the B train humidistat.

Evaluation

Tech Specs. requires that VP be operable during core alterations. The time period this TSM will be in place, no fuel will be in the reactor. This TSM allows the VP system to operate for personnel habitability while working in containment. If humidity increases during this time, the A train VP valves will isolate containment and protect the carbon filters. This TSM will be removed prior to core alterations.

TSM 93006714-01

This TSM will defeat the interlock between the Containment Sump pumps and 2WL-827B, that secures the pump when this valve goes closed. This will operation of the pumps while B train essential power is down.

Evaluation

The Containment Sump Pumps are not safety related ant the installation of this TSM will not affect safety related equipment.

TSM 93005051-01, 93005050-01, 93005031-01, and 93005030-01

This TSM removes the internals of check valves between the Nitrogen system (GN) and the Steam Generators (S/Gs). This will assure adequate flow of nitrogen to the S/Gs to ensure nitrogen overpressure during layup and draining conditions. The valves are 2SM114, 115,116, 117.

Evaluation

The GN system is not a safety related syystem. The TSM will be inplace only during plant shutdown and will be removed prior to pressurization tof the S/Gs. Ther is no affect on safety related systems or components.

TSM 93001897-01

This TSM will replace the Unit 2 Gross Durant Counter on 1MC9 in the control room. The existing counter has failed and is obsolete.

Evaluation

The new counter is a direct replacement which will not change the intended function nor will it degrade the seismic qualification of the control board.

TSM 93014718-01

This TSM will prevent YN (Auxiliary Building Chilled Water System) pumps from tripping on a low level compression tank interlock, by placing a jumper between the transmitter and pump control circuits, thus preventing a pump trip on low level. This TSM is necessary to replace the existing level transmitter. It is desired to maintain at least one YN pump operating at all times to provide cooling water to the Nuclear Sampling System (NM) Sample Flow Heat Exchangers.

Evaluation

The purpose of the level-pump interlock is for pump protection. This system is not safety related and this TSM does not involve or affect safety related equipment. The only consequence of a failure of this TSM will be the release of radioactive gas as a result of a loss of cooling to the sample heat exchangers during sampling activities. The design of the Auxiliary Building Ventillation system (VA) and the Radition Monitoring syster (EMF) provide protection against relase to the enviornment in excess of the required limits.

TSM 93017204-01

This TSM is to allow 1A D/G to remain functional and available during the ISI Hydrostatic Test of the A train RN system, by defeating the interlock between the 1A D/G Cooling Water Return to Standby Nuclear Service Water Pond Valve 1RN-846A and the 1A D/G Lake Wylie Cooling Water Return Valve, 1RN847A. The two valves are interlocked so that 1RN-846A will automatically open when 1RN-847A is closed or closing, thereby ensuring both valves will not be closed at the same time. This TSM will allow 1RN-846A to remained powered and closed. During the hydro, it can be opened by the control switch, if needed. The return flow path to the lake (1RN-63A) will be closed but with power on, during the hydro.

Evaluation

During the ISI Hydro it is desired to keep the 1A D/G available, if needed. Since the A train will be declared inoperable and the B train will remain operable, there is no effect on the design basis for either the RN system or the Diesel Generators. Train separation is achieved by closure opf cross-connecting valves on the supply and return headers.

TSM 93014584-01

This TSM is to allow 1B D/G to remain functional and available during the ISI Hydrostatic Test of the B train RN system, by defeating the interlock between the 1BD/G Cooling Water Return to Standby Nuclear Service Water Pond Valve 1RN-848B and the 1B D/G Lake Wylie Cooling Water Return Valve, 1RN849B. The two valves are interlocked so that 1RN-848B will automatically open when 1RN-849B is closed or closing, thereby ensuring both valves will not be closed at the same time. This TSM will allow 1RN-848B to remained powered and

closed. During the hydro, it can be opened by the control switch, if needed. The return flow path to the lake (1RN-58B) will be closed but with power on, during the hydro.

Evaluation

During the ISI Hydro it is desired to keep the 1B D/G available, if needed. Since the B train will be declared inoperable and the A train will remain operable, there is no effect on the design basis for either the RN system or the Diesel Generators. Train separation is achieved by closure opf cross-connecting valves on the supply and return headers.

TSM 93012624-01

This TSM will allow the Refueling Water Storage Tank (FWST) heaters setpoint for de-energization to be lowered from 37% to a 10% FWST level cut-off. This will allow the FWST to remain operable during the the period where FWST inventory has been transfered to the Refueling Canal.

Evaluation

The FWST heaters are at 4% to 5% tank level. The minium level in the FWST required by Technical Specifications (45,000 gal) with the plant in Mode 5 is approximately 11.5%. Per the Basis of this Tech. Spec., only 3500 gal. of 2000 ppm borated water is necessary for maintaining Shutdown Margin (SDM). At 10% FWST level there is 39000 gal. There is adequate level remaining to keep the heaters covered even in the event of using the 3500 gal. to main SDM.

TSM 93001897-01

This TSM replaces the Unit 2 Gross Durant Counter on 1MC9 in the Control Room.

Evaluation

The existing Durant Counter is in need of repair, however, these counters have become obsolete and no spare parts are available.. This TSM will replace the counter with an direct replacement and will not change the intended function of the counter nor will it degrade the seismic qualificqtion of the control board.

TSM 93001851-01

This TSM will darken annunciator 1B CFPT CL TROUBLE by sliding link from the output of 1CLPT5310, pressure switch. One of several inputs to this general annunciator is causing this annunciator to be continuously lit.

Evaluation

The instrument loop affected by this TSM does not perform any automatic action or safety related functions. Local indication of the defeated input remains available.

TSM 93001419-01

This Tsm will remove power from a number of dampers in the Control Room Ventillation System (VC) and these

dampers will be secured in the open position.

Evaluation

Securing this set of dampers in their open position some changes in flow in the system, current on the air handling units affected, are expected, however , it is anticipated that the changes will not be sigfnificant. Temperatures in the areas serviced by this system are also not expected to change significantly. Engineering instructions are provided with this TSM to monitor before and after conditions and resolve or rebalance system as necessary to maintain design functions. This TSM does not alter the design functions of the VC system, therefore has no safety saignificance.

TSM 92095443-01

This TSM will allow a flow path from the Turbine Building Sump (WP) system directly to the Initial Holdup Pond without first going through the Conventional Waste System (WC). This TSM will alow repairs to be made to piping and valves that interface between WC, WP, and WP.

Evaluation

The WP system has a Radition Monitor (1, 2 EMF31) that monitors flow through this system that is potentially radioactive. IF activity is detected, the WP sump pumps are automatically secured. The system can be manually realigned to send flow to be processed as radioactive waste. This ability to re-direct flow if radioactive, is not degraded by this TSM. None of the systems or components of these systems are safety related nor does this TSM affect systems important to safety.

TSM 92094773-01

This TSM will convert the Reactor Coolant (NC) system Wide Range (W/R) and Mid-range (M/R) D/P level instrumentation to direct acting instruments with a dry reference leg . (previous design was reverse acting with a wet reference leg)

Evaluation

These instruments are used during Shutdown operations while draining/filling the NC system. These instruments are important during reduced inventory and therefore are used in operations of the Residual Heat Removal system (ND). They are important for avoiding loss of ND events. These instruments do not have any automatic functions. These instruments replace existing level instruments and do not introduce any new error in the level instrumentation. The ability to provide accurate indication of NC system level is noty degraded by this modification and therefore the probability of a loss of ND event is not increased.

TSM 92090329-01 and 92090325-01

This TSM will allow the placement of blind flanges 2BBFE5010, 2BBFE5020, 2BBFE5000 and 2BBFE5030, to allow the S/Gs to refill while the S/G Blowdown system piping is being replaced.

Evaluation

This TSM will be installed while the Unit is Shutdown and in the NOMODE condition and will be removed prior to unit startup. This TSM will not affect the S/G during the time frame that this TSM is installed.

TSM 92086606-019

This TSM will allow the removal of handwheel from 2NC-37 and the installation of a seal cap to stop leakage from the valve.

Evaluation

The cap is designed for the operating pressure and temperature of the system and will not degrade the existing pressure boundry of the valve. The additional weight does not introduce any seismic concerns.

TSM 92079668-01, 92075160-01, and 93005391-01

This TSM allow the installation of a vacuum transmitter in place of the Pressurized Relief Tank (PRT) pressure transmitter to provide the control room vacuum indication during Vacuum Refill operation.

Evaluation

There is no requirement for PRT pressure during this mode of operation. The PRT pressure instrument is interlocked with 1WG-220 for auto closure on Hi PRT pressure. This WG piping will be isolated to support the Vacuum Refill process. This instrument loop in not safety related. The transmitter is a direct replacement so there are no seismic concerns.

TSM 92074457-01

This TSM will allow the installation of a blank a the flanges between the flex hoses and valves 1NC-199, 1NC-202, 1NC-205, and 1NC-208 to eliminate oil leakage through these valves.

Evaluation

These valves are used to fill and drain the NC pumps lower oil pots. The installation of these blanks does not operation, as the valves are normally closed and the blanks only serve to ensure isolation. The additional weight of the blanks does not cause any seismic concerns.

TSM 92084273-01

This TSM allows the installation of a jumper to defeat Auxiliary Building Filtered Exhaust Fan (ABFXF) 1A and Auxiliary Building Unfiltered Exhaust Fan (ABUFXF) 1A interlock to allow various Auxiliary Building Ventilation System (VA) fans to operate while ABFXF-1A is out of service for maintenance.

Evaluation

The evaluation addresses questions and operability concerns of:

1. Auxiliary Service Building (ASB) Radiation Levels
2. Condensate Air Ejector (ZJ) System operation
3. Technical Specification Flow Rates
5. Control Room Habitability

With ABFXF-1A and ABUFXF-1A down, the ability to obtain proper flow rates through the ASB is not possible. An unmonitored release could occur. To ensure this does not happen, the Auxiliary Building Radwaste Supply Unit (ABRSU) -1 will be tagged out, which will cause the Hot Machine Shop and Radwaste Shipping Area to be at a negative Pressure.

The ZJ System will be aligned to the Unit Vent, which is monitored.

The 30,000 +/- 300 CFM Tech. Spec. Flow rates through the ABFXF-1B will not be met. This flow rate is a test point and not a flow rate for Post LOCA design criteria. The Post LOCA flow rate will be met with this TSM installed.

Control Room Habitability will be ensured by the performance of the Control Room Pressurization Test.

The Engineered Safety Features of the VA system are not affected by this TSM.

TSM 93043094-01

This TSM Increases the Main Turbine #8 Vibration Alarm Setpoint from 7 mils to 9 mils.

Evaluation

Vibration for this bearing is at or near the 7 mils setpoint rendering the alarm incapable of warning the operator of a vibration problem. Increasing the alarm setpoint will allow the operator to be alerted on increasing vibration. Turbine vibration alarm setpoints are not addressed in the FSAR or Technical Specifications, therefore this TSM does not affect safety related systems or components.

TSM 93068032-01

This TSM will allow the installation of a temporary pipe plug at Flow Element 1RNFE6850 in the Nuclear Service Water System (RN)

Evaluation

The RN system supplies cooling water to safety and non-safety systems and components. The installation of this pipe plug is in the non-safety portion of the system. The flow element affected is only used for flow balance testing. This testing is not mandatory and will not be required to return the system to service. The plug installation meets design and code requirements. The safety portion of the system will function as designed.

TSM 93070322-01

This TSM provides for temporary cooling to the reactor building during times when the Containment Chilled Water system (YV) is out of service.

Evaluation

The Containment Ventilation (VP) system is designed to maintain the containment environment within acceptable limits for personnel access during inspection, testing, maintenance and refueling operations. This TSM includes Plant Heating Water (YH) setpoint adjustments temporary placement of Air Handling Units on the Auxiliary Building Roof, and associated piping to route chilled water to the AHU. This TSM will not affect the ability of the VP system to perform its intended function. The limiting condition for this TSM is the 49 F limit on the containment penetration. To prevent overcooling of the penetration the YH system primary loop pumps will be set to start at 60 F and the local containment YH supply loop will be set to control leaving air temperature at 52 F. These setpoint adjustments will ensure the YH system

provides heat when needed to prevent overcooling. The YH system is not safety related. There are no Tech.

Spec. Containment Temperature concerns with the Unit in Refueling. Evaluation of temporary loads, piping and AHU, and hanger design, were found to cause not seismic concerns. The implementation of this TSM does not affect any systems or components required for safe shutdown or degrade any system operation in any way to cause concern for safety.

TSM 92095444-01

This TSM places a connection on the by-pass line around the chemical pot feeder in the Recirculating Cooling Water (KR) system, for the purpose of installing in-line corrosion monitoring equipment.

Evaluation

The addition of the monitoring equipment will not affect the operation of the KR system in any way. The KR system is not a safety related system and the installation of this TSM does not affect safety related systems or components.

TSM 92093546-01

This TSM allows the welding of a metal plate over a small hole in the Heater Vent (HV) system, down stream from valve 1HV79.

Evaluation

The HV system is not safety related. This TSM does not affect safety related systems or components. The pipe, with the hole is operable. This patch will stop the leak. Testing has been performed to ensure proper wall thickness for the weld.

TSM 93004284-01

This TSM allows the installation of temporary power source for standby use, during Unit 2 outage, 2EOC5. The Power source is two, 4160v D/Gs with a 4160/6900 step up transformer that can be connected to the Unit 2 6900v switch gear and used to power an Essential 4160v buss.

Evaluation

There may be times planned during this outage where there will be only one Emergency Diesel Generator (EDG) will be available with the unit in a low decay heat condition and reduced inventory conditions. the Catawba Shutdown Risk Management program requires that in these conditions one EDG be Operable and one be Available. The purpose if this TSM would be to provide an alternate temporary power source to be available to power the 2ETA Essential switchgear through the Unit 6900v switchgear. Administrative controls for the actual use of the temporary power source will be developed as a part of this TSM.
Technical Specifications require an Operable EDG with the Unit in mode 5 or 6. By providing an additional power source available (per this TSM) to power the Essential switchgear without an Operable EDC , in the event of a loss of offsite power, does not increase the likelihood of a loss of decay heat removal. The loads to be aligned to switchgear 2ETA have been reviewed. They are a subset of the loads for which 2ETA was designed. Also, 6900v Buss, 2TC will not have normal loads in operation during connection of the temporary power source. No safety related cables are in the path of the cables to be installed per this TSM. One fire zone will be penetrated, but is not a committed NRC fire zone. Compliance with Appendix R is not degraded.
Normal shutdown cooling at Unit 2 is not adversely affected. Neither movement of fuel or core alterations are affected. The likelihood of a loss of Spent Fuel Cooling is not increased. Unit 1 operation is not affected. Loads on affected power supplies remain within design specification. No "sneak circuits" are created. Thus the

probability of an accident is not increased.