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LIC-91-070R

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

References: 1. Docket No. 50-285
2. Letter from OPPD (W. G. Gates) to NRC (Document Control Desk) dated February 15, 1990 (LIC-90-0138)

Gentlemen:

SUBJECT: Annual 10 CFR 50.59 Report for Fort Calhoun Station

As required by 10 CFR 50.59(b)(2), please find attached Omaha Public Power District's annual report containing brief descriptions of changes, tests and experiments including summaries of the associated safety evaluations performed for the Fort Calhoun Station. This information is for the period of February 1, 1990 through January 31, 1991.

If you should have any questions, please contact me.

Sincerely,

W. G. Gates

W. G. Gates
Division Manager
Nuclear Operations

WGG/sel

Attachments

c: LeBoeuf, Lamb, Leiby & MacRae
R. D. Martin, NRC Regional Administrator, Region IV
W. C. Walker, NRC Project Manager
R. P. Mullikin, NRC Senior Resident Inspector

ATTACHMENT

Changes, Tests and Experiments Carried Out Without Commission Approval

System Acceptance Committee (SAC) Modification Packages for Period from
February 1, 1990 through January 31, 1991

<u>Package No.</u>	<u>Description/Analysis</u>
MR-FC-81-51	Control Room HVAC Replacement

Description:

This modification (mod) removed the Control Rooms old Heating, Ventilation, and Air Conditioning (HVAC) units from Room 81 and replaced them with new units located inside the Control Room. New ductwork was installed to tie the new units into existing supply and return ducts. The Control Room space was significantly remodeled during this mod. Remodelling included new bathroom facilities, Shift Supervisors office, mezzanine area, mechanical equipment room and main door air lock. Also, a new kitchen area was added. Wall penetrations from Room 81 were repaired to prepare for future charcoal filter additions. AI-106A & B panels were installed to provide HVAC controls and the toxic gas monitors were relocated. A humidifier was installed to control the computer room space environment. New Component Cooling Water (CCW) and Raw Water (RW) piping was run from Room 69 through Room 81 to the Control Room to provide cooling water to the new HVAC units with all needed control valves, wiring and pneumatics. This also included testing of new systems and required flow balancing.

Safety Analysis:

The Control Room HVAC modifications provided greater protection to operators from airborne radioactivity during accident conditions by eliminating the existing air leakage paths. This mod provided new components which are functionally equivalent to the original system. Consequences of an equipment malfunction were mitigated by redundant components. Alternate shutdown capability already existed to ensure that the plant could be safely shutdown in the event the control room would need to be evacuated. The margin of safety was not reduced and this mod did not result in an unreviewed safety question.

MR-FC-82-026	Operating Interface Between HE-2 and FH-12
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Description:

This mod provided for the installation of the interlock system to limit simultaneous travel in close proximity between cranes, HE-2 (Refueling Area Crane) and FH-12 (Spent Fuel Bridge).

<u>Package No.</u>	<u>Description/Analysis</u>
MR-FC-82-026 (Continued)	<p><u>Safety Analysis:</u> This mod, along with Operating Instruction OI-HE-5, reduced the possibility of a collision between cranes HE-2 and PH-12, thus decreasing the probability of the occurrence of a fuel handling accident. The margin of safety as defined by Technical Specification (Tech Specs) 2.8 and 2.11 is not affected by the tripping of either crane when close proximity with the other crane occurs. This mod does not involve an unreviewed safety question.</p>
MR-FC-82-150B	<p>Replacement of Vacuum De-aerator Pumps DW-46A/B</p> <p><u>Description:</u> This mod provided for the replacement of DW-46A/B, associated piping and supports. Component cooling water for heat exchangers was supplied via 3" carbon steel piping tied into the 6" CCW header supplying the waste evaporator. The pumps were supplied as a skid mounted package which included a belt-driven two stage liquid ring backing pump, heat exchanger, circulation pump and air/water separator tank.</p> <p><u>Safety Analysis:</u> The probability of occurrence or the consequences of an accident, or the malfunction of equipment important to safety per the USAR, will not be increased because: 1) the section of piping worked on is non-CQE and 2) the equipment installed is not required for safe shutdown. This mod did not change the function of the systems affected and the margin of safety were not reduced.</p>
MR-FC-82-005	<p>Heater Drain Pipe Overpressurization Protection</p> <p><u>Description:</u> This mod installed new relief valves set to 185 psi on the suction side of each heater drain pump with new relief valve discharge lines. It also replaced the three existing 150 lb. expansion joints with new 300 lb. expansion joints. The existing relief valve on the heater drain tank was reset to a lower pressure of 185 psi.</p> <p><u>Safety Analysis:</u> This mod involved only non-safety related components and did not reduce the margin of safety. The heater drain system was not identified as an accident initiator, no Critical Quality Element (CQE) equipment was involved and no adverse interactions with other plant systems were identified. System performance was not affected. No primary pressure boundary or fuel integrity system were affected. The heater drain system is not required for safe shutdown. This mod did not result in an unreviewed safety question per 10 CFR 50.59.</p>

<u>Package No.</u>	<u>Description/Analysis</u>
MR-FC-85-092B	<p>Water Plant Control Room Expansion - Electrical</p> <p><u>Description:</u> This mod removed and relocated control room devices from panel AI-68 to AI-104 for pH neutralization, added additional lighting, relocated an alarm bell, installed a deadman switch for acid and caustic transfer pumps, installed new heat pumps (VA-78 & VA-79), installed a new GAI-Tronics Station and installed a new hoist.</p> <p><u>Safety Analysis:</u> This mod did not change the function of the water plant. The water plant is not safety related and no new malfunctions or accidents were created. This mod did not change the margin of safety or result in an unreviewed safety question.</p>
MR-FC-85-196	<p>Increased Minimum Flow for Feedwater</p> <p><u>Description:</u> This mod increased the minimum recirculation for each pump from 750 gpm to 1250 gpm.</p> <p><u>Safety Analysis:</u> This mod involved non-CQE equipment. Failure of the recirculation system would not result in any accident limiting the ability to safely shutdown and maintain the reactor or control the release of radioactivity.</p>
MR-FC-86-20B	<p>Warehouse Relocation - Construction Part B</p> <p><u>Description:</u> This mod provided for the construction of the new 40,000 square foot warehouse facility with office, a partial mezzanine, and a decontamination facility. The new warehouse is built within the security restricted area of the Fort Calhoun Station and is situated along the boundary so that materials can be delivered to the Warehouse and processed through a controlled search area prior to entering the restricted area.</p> <p><u>Safety Analysis:</u> The new warehouse was constructed to provide additional storage space and improved features. There are no systems involved in this mod for the safe operation of the plant. The warehouse structure and its equipment are not the basis for any Tech Specs. This mod does not involve an unreviewed safety question.</p>

Package No.

Description/Analysis

MR-FC-86-049

Redistribution of Loads on DC Buses and Instrument Inverters

Description:

This mod was for installing new breaker panels for AI-42A and AI-42B. It also changed power feeds for EE-32 from AI-40C and AI-40D to AI-42A and AI-42B.

Safety Analysis:

This mod did not affect system function, but rather revised the source of power. It involved changing the non-CQE emergency alarm (EE-32) power source from a CQE inverter to a non-CQE inverter. The emergency alarms are not discussed in Updated Safety Analysis Report (USAR) Section 14. This mod did not involve an unreviewed safety question.

MR-FC-86-77

Dryers for DG-1 and DG-2 Starting Air

Description:

This mod provided for the installation of four new air dryers on starting air for DG-1 and DG-2. The existing air piping was revised/modified to accompany the installation of the air dryers to supply air that is cooled and filtered to the D/G air start components.

Safety Analysis:

The new equipment provided by this mod is classified as non-CQE since the upstream compressors and associated equipment are not required for diesel Starting. The function of the compressor is a non-CQE makeup role and the mod did not change this. The equipment and piping are seismically supported so as not to adversely impact nearby CQE equipment. Other interfaces did not exist so that consequences of an accident were not increased. System performance was maintained since 5 starts were still available as was electrical power to safeguards. In addition, the system to which the equipment attaches has redundancy in that there are two starting air systems and two diesel generators. No margins of safety were reduced.

MR-FC-86-91

Limiterque Motor Operato. Update

Description:

This mod provided for more accurate indication of valve position in the control room via addition of another limit switch; installed valve operator gearbox grease pressure relief valves; installed keylock bypass switches to disable the thermal overloads during operation, while providing a means to switch overloads into circuit for protection during testing; added control room indication of thermal overload "tripper" condition; and resolved HCV-308 hammering by installing a three position, spring-return-to-center control switch, which allows the circuit to open once the valve has traveled to its desired position.

Package No.

Description/Analysis

MR-FC-86-91
(Continued)

Safety Analysis:

This mod provided for the installation of a bypass switch and overload blocking which increases the availability of CQE valves required to operate under accident conditions. The grease relief valves eliminated an existing failure mode and the additional rotors allowed for improved control and position indication. No new or increased radioactive release paths were established. The margin of safety was not reduced.

MR-FC-86-117

Security Barrier for Air Compressor Room

Description:

This mod converted Door 1011-1 into a security door by relocating hardware from door 1007-16 and combining the circuitry for Door 1007-15 with 1007-16.

Safety Analysis:

The probability of occurrences or the consequences of an accident was not increased because the equipment and systems worked on as part of this mod are non-CQE. Conduit and junction boxes were seismically supported so as not to impact any CQE equipment. Compensatory measures were taken in accordance with the security plan prior to degrading any security door. The margin of safety was not reduced because modifications were done so as to maintain the 3-hour rating.

MR-FC-87-03

Rigid Sway Strut Assembly (RSSA) Replacement

Description:

The sway strut assembly support SIS-190 loads were found to exceed the vendor catalog allowable load rating. The sway strut and associated hardware were replaced by a higher capacity Bergen Patterson Rigid Sway Strut Assembly, 12 kip design support.

Safety Analysis:

This mod provided for the installation of 12 kip and 10 kip RSSA supports replacing #8 RSSAs on SIS-190 and RWS-50A. This improves the availability and reliability of the Safety Injection (SI) and Shutdown Cooling Heat Exchangers by using 12 kip and 10 kip struts instead of 3 kip. These supports are on engineered safeguards systems and improve plant and public safety for the evaluated accidents in the USAR. This mod did not involve an unreviewed safety question.

Package No.

Description/Analysis

MR-FC-87-36

Repair Fire Dampers

Description:

This mod removed the following eight 1/2-hour fire dampers (FDs): 39, 40, 62, 63, 65, 66, 81, and 89, then replaced them with four 3-hour fire dampers. A new access door was installed near FD 90 and the two fire dampers in the Quality Assurance (QA) vault were remounted to meet the UL requirements.

Safety Analysis:

This mod was to change fire dampers and duct configurations to bring the FDs into compliance with their UL listing and manufacturer's installation requirements. By doing this, it ensures that the dampers will operate as designed and maintain a 3-hour fire barrier. The appropriate compensatory measures as dictated in the Tech Specs were enforced during construction of this mod. This mod did not reduce the margin of safety.

MR-FC-88-11

Penetration M-73, Upgrade Instrument Air

Description:

This mod was to Containment Instrument Air (IA) header penetration M-73. The scope included the following:

- (1) Performance of a containment test of penetration M-73.
- (2) Removed existing PCV-1849 and piping up to IA-509.
- (3) Installed new Stainless Steel (SS) spool piece and new PCV-1849B.
- (4) Tubed existing air supply to PCV-1849B.
- (5) Performed air pressure tests.
- (6) Installed new SS spool piece and valve PCV-1849A.
- (7) Installed pressure switch PC-1849A.
- (8) Installed seismic conduit supports.
- (9) Installed control switch for PCV-1849A in AI-43B.
- (10) Installed wiring in AI-43A and moved control switch (CS-380) to a new location on CB-10.
- (11) Installed new control switch for PCV-1849B on CB-10.
- (12) Installed new indicating lights on all controls and installed new limit switches and solenoid operated valves for PCV-1849A and B.
- (13) Performed system tests.

Safety Analysis:

The modified system maintains the ability of the plant to safely shutdown and maintain the reactor as well as limit the release of radioactivity. Design barriers for containment integrity is improved since two qualified isolation valves are be installed. Redundant valves insure adequate margin of safety for containment integrity as per ANSI. No CQE equipment nearby or in the system were affected by this mod. This mod did not involve an unreviewed safety question.

Package No.

Description/Analysis

MR-FC-88-119

RCS-2 Wall Plate

Description:

The original construction of RCS-2 installed the snubber at vertical angle of approximately 12°, not 5.85°, as designed. This was necessary due to the interference with a RCP case. The installed configuration caused the snubber to bind in its end clevis. It also made snubber removal and reinstallation associated with required testing and maintenance more difficult. Temporary modification, (TM) TM-88-M-85, revised the support configuration to relieve this condition. Thus, the purpose of this mod is to document the design aspects of this revised support configuration.

Safety Analysis:

This mod did not change the function of pipe support RCS-2. Since the function of RCS-2 did not change, the consequence of previously evaluated equipment malfunctions did not increase and the margin of safety was not reduced. This mod did not result in an unreviewed safety question per 10 CFR 50.59.

MR-FC-89-005

Test Tees for HCV-238, HCV-239 and HCV-240

Description:

This mod removed existing copper air lines and valves to HCV-238, HCV-239 and HCV-240. New stainless steel air lines were installed with test tees and new 3-way isolation valves.

Safety Analysis:

Section 9.12.3 of the USAR states that the IA system was constructed to USAS B31.1. This mod constructed portions of the system to USAS B31.7. The safety margin of the CQE portion of the IA system was ensured by adhering to B31.7 requirements. The plant was maintained in an analyzed condition (containment IA outage per plant approved procedure OI-CA-4) and nuclear safety was not affected. This mod did not reduce the margin of safety because the installation procedure had provisions to ensure compliance with Tech Spec 2.2 maintaining the margin of safety of the Chemical and Volume Control System (CVCS). This mod did not negatively impact the CVCS ability for simultaneous hot leg injection.

Package No.

Description/Analysis

MR-FC-89-36

Steam Generator (S/G) Blowdown Tank Erosion

Description:

M1 procedure removed and reinstalled a new section of wearing plate in the blowdown tank. Also, a section of the shell was repaired by weld buildup at nozzle locations. The wearing plate had extensions added at top and bottom. A new liner was installed to existing wearing plate. M2 procedure replaced the 2" isolation valves FW-1451 and 1452 with 4" and with associated piping and nozzles on the inlet side of the tank.

Safety Analysis:

The S/G Blowdown system is not required for safe shutdown. No direct interfaces with systems important to safety were identified. Indirect interface evaluation did not identify any path or interaction that would prevent any equipment from performing its function of preventing or mitigating the consequences of postulated accidents that could cause undue risk to the safe operation of the facility or undue risk to the health and safety of the public.

MR-FC-89-067

FW-10 Speed Control

Description:

This mod provided for the installation of a pressure differential indicator (DPI-1038), back pressure trip test tee, differential pressure transmitter cell (DPT-1039), and installed new tubing.

Safety Analysis:

This mod did not change the basis function and performance requirements of FW-10 previously analyzed in the USAR. The purpose of the indicator and test connections are to assist in the proper calibration of the speed control loop. The mod was performed during cold shutdown when FW-10 was not required to be in service per Tech Spec 2.5(1), therefore, the margin of safety was not reduced. The Auxiliary Feedwater system (AFW) system was in a configuration during testing such that all necessary support services required for CQE equipment were available.

MR-FC-90-12

HCV-1107A/1108A Support Modification

Description:

This mod provided for the design change and modification to supports on the Auxiliary Feedwater piping inside containment. This mod removed a valve operator restraint as described/IMPLIED in the USAR (FWS-102).

Package No.

Description/Analysis

MR-FC-90-12
(Continued)

Safety Analysis:

This mod made no changes to the piping configuration, design conditions (i.e., pressure, temperature, flow), system interfaces or operating modes. This mod increased line flexibility maintaining the line within the design basis, as well as, increased the reliability of the system in performing its functions. No new or increased radioactive release paths were established. Since system design parameters and functional requirements were unchanged and line flexibility was increased, the margin of safety was unchanged. This mod did not involve an unreviewed safety question.

MR-FC-90-016

Containment Main Steam Support Modification

Description:

This mod provided for the design change and modification on the Main Steam piping supports inside containment.

Safety Analysis:

This mod made no changes to the piping configuration, design conditions (i.e., pressure, temperature, flow), system interfaces or operating modes. This mod increased line flexibility maintaining the line within the design basis, as well as increased the reliability of the system in performing its functions. No new or increased radioactive release paths were established. Since system design parameters and functional requirements were unchanged and line flexibility was increased, the margin of safety was unchanged. This mod did not involve an unreviewed safety question.

MR-FC-90-17

Containment Safety Injection Support Modification

Description:

This mod provided modification of safety injection supports located inside containment. The modification of supports ranged from base plate stiffening to clamp replacement with new lugs to near total reconstruction of support. Supports modified were SIS-220, SIS-130, SIH-181, SIS-140, SIS-188, SIS-118A, SIS-128, SIS-132, SIS-135, SIH-153, SIH-157, SIH-158 and SIH-207.

Safety Analysis:

This mod made no changes to the piping configuration, design conditions (i.e., pressure, temperature, flow), system interfaces, or operating modes. The mod increased line flexibility, maintaining the line within the design basis. CQE and containment pressure boundaries were unchanged. No new or increased radioactive release paths were established. Per Safety Analysis for Operability (SAO) 90-006, the SIS piping was able to withstand seismic loadings without failing. This mod did not result in an unreviewed safety question per 10 CFR 50.59.

<u>Package No.</u>	<u>Description/Analysis</u>
MR-FC-90-20	<p>Disconnect for Room 71 Lapping Machine</p> <p><u>Description:</u> This mod provided for the installation of an electrical outlet/receptacle that will allow operation of the portable reactor coolant pump (RCP) seal testing and lapping machine.</p> <p><u>Safety Analysis:</u> This mod did not increase the probability of occurrence of an accident because Room 71 in the Auxiliary Building is a limited CQE structure that will support the non-CQE electrical outlet. It has been seismically analyzed and will not be degraded as a result of this mod. The outlet was isolated from safety-related MCC-4A1 via CQE breaker MCC-4A1-A07. The margin of safety was not reduced by this mod.</p>
MR-FC-90-21	<p>CCW Heat Exchanger Isolation Valves Retaining Springs and Clamps</p> <p><u>Description:</u> This mod increased reliability of CCW Heat Exchanger Isolation Valves HCV-489A/B, HCV-490A/B, HCV-491A/B and HCV-492A/B.</p> <p><u>Safety Analysis:</u> This mod provided added assurance that these valves will remain coupled to their operators and will respond to positioning signals as part of an accident response. This mod improved valve reliability and left valve performance and function unchanged. The margin of safety was not reduced since the valve reliability was improved by ensuring that the valve remains coupled to the valve operator and performs as designed.</p>
MR-FC-90-053	<p>Containment Spray Header Valve (HCV-344) Interlock</p> <p><u>Description:</u> This mod provided for interlocking the containment spray (CS) header valve, HCV-344, with containment spray pumps SI-3B and SI-3C such that in the event of a containment spray actuation signal (CSAS), the breakers for BOTH SI-3B and SI-3C must be closed for HCV-344 to auto-open. This was provided to protect containment spray pump motors from overloading due to pump runout in an event where only one spray pump starts by ensuring that only one spray header is open.</p> <p><u>Safety Analysis:</u> This mod configures the response of the CS system to a Design Basis Accident (DBA). The CS system remained fully redundant and met single failure criteria. The margin of safety as defined by the Tech Specs was not reduced. This mod did not result in an unreviewed safety question.</p>

Procedure Changes and Temporary Modifications (TMs)

Procedure/TM No. Description/Analysis

AOP-6 Fire Emergency

Description:

This procedure change provided the re-write of Attachment 12 for the emergency repair of Low Pressure Safety Injection (LPSI) pump SI-1B following a fire in Corridor 4 of the Auxiliary Building. Proper emergency repair of SI-1B will allow safety functions to be properly performed and satisfy design basis requirements for Appendix R of 10 CFR 50.

Safety Analysis:

Failure of SI-1B due to fire in Fire Area 6, is allowed by 10 CFR 50, Appendix R provided emergency repair procedures and materials are dedicated on site. This procedure change provides that no additional or different accidents have to be postulated. This procedure change allows personnel to recover from the initial accident to allow safe plant shutdown. Compliance with Appendix R, by allowing proper emergency repair of SI-1B, reduces the consequences of an accident. This activity does not involve an unreviewed safety question.

AOP-11 Loss of Component Cooling Water

Description:

The procedure was changed to reflect the fact that the RW/CCW interface valves are now normally hand-jacked closed. (See TM-90-022)

Safety Analysis:

This procedure change only reflects the changes made by TM-90-022, "Hand-jacking closed of all RW Interface Valves." This procedure change is not an unreviewed safety question. (For further analysis see TM 90-022 elsewhere in this attachment.

EOPs-2, -3, -4, -5 Blanket Procedure Change (Various EOPs)
EOPs-6 and -20

Description:

These procedure changes provide updates incorporating modification MR-FC-90-053 and containment pressure evaluation changes, but are not described in the USAR. MR-FC-90-053 "Containment Spray Header Valve Interlock" affects a change to the facility requiring SI-3A Minimum Recirculation Isolation Valve SI-138 to be closed.

Safety Analysis:

These procedure changes are being incorporated to provide the required operating instructions. Therefore, these changes are not unreviewed safety questions. (See Safety Analysis for Modification MR-FC-90-053).

<u>Procedure/TM No.</u>	<u>Description/Analysis</u>
MP-FC-1	<p>Flood Control Preparedness</p> <p><u>Description:</u> The purpose of this procedure change was to identify the 5 additional flood control gates which have been installed in the new Radwaste Processing Building.</p> <p><u>Safety Analysis:</u> Identification of the location of flood control gates and storage locations did not create the possibility or increase the probability of occurrence of an accident since the actual operation of the flood control gates has not changed. Identification of the locations and the storage location of flood control gates would only reduce minor confusion when the flood gates would be needed. No margin of safety was reduced due to this procedure change.</p>
OI-CC-1	<p>Component Cooling System Normal Operation</p> <p><u>Description:</u> This procedure change added notes that reflect the CCW/RW interface valve condition (hand-jacked closed) per the implementation of TM-90-022.</p> <p><u>Safety Analysis:</u> This condition has been evaluated in the safety evaluation for TM-90-022, "Hand-jacking closed of all RW Interface Valves." Per that evaluation it has been concluded that this procedure change does not constitute an unreviewed safety question and does not affect nuclear safety.</p>
OI-FP-6	<p>Fire Protection System Inspection and Test</p> <p><u>Description:</u> This procedure change made various administrative and procedural enhancements including the following:</p> <ol style="list-style-type: none"> 1. Changed drain valve flush from monthly to quarterly. 2. Deleted weekly alarm check and incorporated into quarterly drain valve flush. 3. Updated fire extinguisher locations. 4. Added procedures for testing warehouse Emergency Diesel Generator (EDG) deluge system. <p><u>Safety Analysis:</u> The revisions to Operating Instruction OI-FP-6 have no affect on any accidents previously evaluated in the USAR, nor can these revisions create additional or different failure modes in any safety related equipment. The changes conform to all Tech Spec test and inspection requirements. Therefore, the margin of safety as defined in the basis of Tech Spec 2.19 and 3.15 is not reduced.</p>

Procedure/TM No.

Description/Analysis

OI-RC-3

Reactor Coolant System (RCS) Start-up

Description:

This procedure change did the following: 1) allowed performance of the polar crane arrival or refueling inspection prior to the completion of the RCS heatup, 2) changed RCS hydrogen concentration lower limit to 15 cc/%g during plant startup, 3) added steps to verify S/G chloride and sulfate concentrations are within abnormal limits, 4) deleted references to RM-050 and RM-051 shutdown setpoints (these setpoints no longer exist), and 5) corrected position titles.

Safety Analysis:

Ensuring that S/G chloride and sulfate concentrations are within abnormal limits reduces accident probability. This procedure change (PC) did not affect fission product barriers or play a role in mitigating radiological consequences of an accident. This PC did not have an adverse affect on the RCS as evaluated in EPRI 5960, Table 3-4a. The margin of safety was not reduced and this PC does not involve an unreviewed safety question.

OI-RW-1

Raw Water System Normal Operation

Description:

This procedure change added notes that reflect the CCW/RW interface valve condition (hand-jacked closed) per the implementation of TM-90-022.

Safety Analysis:

This condition has been evaluated in the safety evaluation for TM-90-022, "Hand-jacking closed of all RW Interface Valves." Per that evaluation it has been concluded that this procedure change does not constitute an unreviewed safety question and does not affect nuclear safety.

SO-G-5

Fort Calhoun Station Plant Review Committee (PRC)

Description:

This procedure change was for revising Appendix A criteria for Safety Audit and Review Committee (SARC) reviews. Modifications are to be reviewed by the Nuclear Safety Review Group (NSRG). Also, added criteria so that any activity done under 10 CFR 50.59 provisions is selected for SARC Subcommittee #2 review.

Safety Analysis:

The revised criteria satisfy the minimum requirements of Tech Spec 5.5.2.7a. This procedure change does not involve the operation of any systems or equipment. This activity cannot initiate any accident sequences or reduce the effectiveness of any safety system components required for accident mitigation. Therefore, this procedure change does not involve an unreviewed safety question.

Procedure/TM No. Description/Analysis

SO-G-21 Modification Control

Description:

This procedure change institutionalizes the NSRG to satisfy Tech Spec 5.5.2.7 for SARC review of modification safety evaluations.

Safety Analysis:

This procedure change does not affect the operation of any plant systems and does not change the probability of occurrence of any natural phenomena. Tech Spec 5.5.2.7 allows the SARC Chairman to designate subgroups to perform SARC responsibilities and provide reports on their activities to the SARC. Therefore, the margin of safety as defined in the basis for any Tech Spec is not reduced.

SO-O-25 Temporary Modification Control

Description:

This procedure change added responsibility for functional checks, steps for revising a PRC approved TM, and Standing Order (S.O.) M-101 to the list of references as well as removed forms from this procedure which were placed in the Forms Manual.

Safety Analysis:

The procedure change to S.O. O-25 does not have an affect on Safety Function Evaluations. Each TM authorized by S.O. O-25 must be evaluated for its affect on Safety Function Evaluations pursuant to 10 CFR 50.59 requirements. This revision to S.O. O-25 does not result in an unreviewed safety question since S.O. O-25 only provides the method for controlling and installing TMs.

SP-ECT-1 Eddy Current Testing of Heat Exchanger Tubes

Descriptions:

This Special Procedure (SP) provided a safe and efficient method of eddy current testing nonferromagnetic heat exchanger tubes. (The "B" Condenser FW-1B and CCW Cooler "A" AC-1A).

Safety Analysis:

These tests did not constitute unreviewed safety question because they involve non-destructive testing and no systems were adversely affected by their performance.

Procedure/TM No.

Description/Analysis

SP-IR-2

Closeout of Incident Reports and Related Paperwork for the Supervisor-Maintenance

Description:

This SP specifies necessary requirements for proper review, completion and closeout of identified documentation under supervision of Supervisor Maintenance. The SP provides instructions for proper documentation of reviews, approvals and safety evaluation determination to close out the identified documentation.

Safety Analysis:

This event did not constitute an unreviewed safety question per 10 CFR 50.59 because each individual occurrence of procedural noncompliance with S.O. G-17 did not affect equipment/component operability. The procedural noncompliances were administrative in nature and did not affect nuclear, plant, or personnel safety.

TDB-III-21.a,
b and c

TDB Figure III.21.a, b and c

Description:

This procedure change was to provide three new Technical Data Book (TDB) figures, which resulted from Tech Spec Amendment 126, in which the gamma term in the P_{var} setpoint calculation was reduced.

Safety Analysis:

The new P_{var} calculation will result in a higher P_{var} trip setpoint. With the higher setpoint, the Reactor Protection System (RPS) will trip sooner on decreasing pressure from Thermal Margin/Low Pressure (TM/LP) than with the USAR original setpoint. The effect/impact will be conservative because of the earlier RPS actuation time. Therefore, this change will not increase the probability of occurrence of an accident and will decrease the consequences of an accident. The margin of safety will not be reduced by increasing the P_{var} trip setpoint in TM/LP.

TDB-III-21.d

Thermal Margin/Low Pressure Calc of P_{var} .

Description:

This procedure change added a new figure to the TDB which displays the P_{var} trip setpoint of TM/LP for three different cold leg temperatures, at 100% power, with ASI ranging between -0.06 and 0.10. This curve provides finer resolution for 100% power than the existing TDB-III.21.a,b and c curves.

<u>Procedure/TM No.</u>	<u>Description/Analysis</u>
TDB-III-21.d (Continued)	<p><u>Safety Analysis:</u> This change reflects an increase in the P_{var} trip setpoint. However, this change is in the conservative direction, because of the earlier RPS actuation time. Therefore, this change did not increase the probability of occurrence of an accident. The consequences of an accident will be decreased and the margin of safety is not reduced by increasing the P_{var} trip setpoint in TM/LP.</p>
TDB-III-26.a	<p>Diesel Generator Loading Curve</p> <p><u>Description:</u> This procedure change provides an update to TDB Figure III.26.a. This update supplies the engine/generator output capability limit as a function of outside ambient temperature. This output limit is not to be exceeded in the event that an operator decides to manually load additional equipment.</p> <p><u>Safety Analysis:</u> This procedure change does not change the capability of the diesel generator nor its reliability. The margin of safety is not reduced since both diesel generators remain operable by this procedure change. This does not involve an unreviewed safety question.</p>
TDB-III-26.a	<p>Fort Calhoun Station Technical Data Book Procedure Update of TDB-III.26.a</p> <p><u>Description:</u> This procedure change updates TDB Figure TDB-III.26.a. This update provides an updated curve of the engine/generator output capability limit as a function of outside ambient temperature for each diesel generator. This change also accounted for the now exciter cabinet configuration when the doors have been reinstalled with ventilation openings cut in the doors.</p> <p><u>Safety Analysis:</u> The imposed limit allows the diesel generator (DG) to start and load all equipment to safely shutdown the reactor in a DBA which meets the FCS design basis. The operation and reliability of the DGs are not degraded by this figure change. The upper limit (shown on the TDB-III.26.a figures) based on exciter temperature test data ensures the exciter will remain operable. This figure change does not involve an unreviewed safety question.</p>

Procedure/TM No.

Description/Analysis

TM-90-013

HJTC Channel "B" Probe #4 Heater Jumper.

Description:

This TM was for the installation of resistor in panel AI-208B so that the complete heater string of 4 heaters (#2,4,6 and 8) would be energized to allow the sensor circuits for #2,6 and 8 to be operable/functional.

Safety Analysis:

The installation of the resistor did not create the possibility of an accident since it provides indication only; nor did it create the possibility of safety related equipment malfunction. The margin of safety was not reduced since Tech Spec 2.21 permits this condition/modification of the Limiting Condition for Operation (LCO).

TM-90-013, Rev. 1

HJTC Channel "B" Probe Sensors #4,6 and 8.

Description:

This TM was for the installation of resistor in panel AI-208B so that the complete heater string of four heaters (#2,4,6 and 8) will be energized to allow the sensor circuits for heaters #2,6 and 8 to be operable; also swap the MI cables of HJTC probe sensors #4 and 6, for operability of #6; this TM will also lift the leads from sensor #8 heated and unheated thermocouples.

Safety Analysis:

The installation of the resistor did not increase the probability of an accident since the system affected (Reactor Vessel Level Monitoring System) is not needed for safe shutdown and provides indication only. The margin of safety was not reduced since Tech Spec 2.21 permits this condition to exist.

TM-90-020

"Decade Box" Resistor Installed in Place of TE-111H.

Description:

This TM eliminated possible cycling of the "A" Reactor Regulating System relays and alarms should TE-111H begin to cycle. This TM will clear the alarms and "dummy in" nominal values for 100% power operation. Because the Resistance Temperature Detector (RTD) is located on the Reactor Coolant System (RCS) hotleg, changing out the bad RTD with a new one during power operation would expose workers to excessive amounts of radiation.

Procedure/TM No.

Description/Analysis

TM-90-020
(Continued)

Safety Analysis:

None of the equipment involved directly or indirectly with this TM is important to nuclear safety as defined in Nuclear Operations Division Quality Procedure, NOD-QP-3 "10 CFR 50.59 Safety Evaluations". This TM did not change the consequences of the accident described in Section 14.11 of the USAR. The safety evaluation was completed within the scope of NOD-QP-3 and it was concluded that this TM did not involve an unreviewed safety questions. This TM is no longer in place at Fort Calhoun Station.

TM-90-022

Hand-jacking Closed of all Raw Water Interface Valves.

Description:

Handjack close the Component Cooling Water/Raw Water Interface Valves utilizing the integral manual handjack mechanism of the interface valve assemblies. This TM is to prevent the inadvertent loss of CCW inventory in the event of a loss of Instrument Air (IA). Loss of IA, concurrent with a Design Basis Accident (DBA), would render the Component Cooling System inoperable due to insufficient makeup capability.

Safety Analysis:

This TM did not increase the probability of an accident previously evaluated in the USAR. Hand-jacking the valve closed had no negative impact on RCS pressure boundary, CCW system pressure boundary integrity or RW System integrity. The margin of safety as defined in Tech Specs Sections 2.3 and 2.4. was not reduced by hand-jacking the interface valves closed since credit is not taken for this capability.

TM 90-030

Eliminating Fire Detection Zone 19

Description:

This TM eliminated fire detection zone 19. False alarms on Zone 19 were causing the CEDM cooling fans VA-2A and VA-2B to trip, therefore, the Zone 19 alarm was eliminated to reduce the number of false alarms. The alarm does not clear when the panel is reset, therefore, leaving the Zone 19 fire detection annunciation in operation is of no use.

Safety Analysis:

The disabling of the fan trip has no affect on safety related equipment necessary for mitigating the consequences of an accident. The VA-2A/B fans can be manually shut down in the event of a fire detected in containment. A fire in containment would be detected by the fire detectors in containment. This TM did not reduce the margin of safety as defined in the basis for any Tech Specs. This TM did not involve an unreviewed safety question. This TM has been removed.

Procedure/TM No.

Description/Analysis

TM 91-001

HJTC Channel "A" Probe Sensors #1

Description:

This TM removed sensor #1 heater and placed a 25 ohm, 50 watt resistor jumper (in AI-208A) in the heater circuit to simulate the load of sensor 1 heater.

Safety Analysis:

The system affected (Reactor Vessel Level Monitoring System) provides indication only and is not needed for safe shutdown. The probe is considered operable for Tech Spec limits if a least 2 sensors in the upper half and two in the lower half are functioning. The margin of safety was not reduced since Tech Spec 2.21 Amendment 11C permits this condition to exist.