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RJW-93-14

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

SUBJECT: Quad Cities Nuclear Station Units 1 and 2
Changes, Tests, and Experiments Completed
NRC Docket Nos. 50-254 and 50-265

Enclosed please find a listing of those facility and procedure changes, tests, and experiments requiring safety evaluations completed during the month of March 1993, for Quad-Cities Station Units 1 and 2, DPR-29 and DPR-30. A summary of the safety evaluations are being reported in compliance with 10CFR50.59 and 10CFR50.71(e).

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

RJ Bucknell 4-14-93

Robert J. Walsh
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Enclosure

cc: A. B. Davis, Regional Administrator
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NRCSAFE.LTR

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SE-93-044

DESCRIPTION:

UFSAR Section 11.5-19, page 11.5-6, deleted paragraphs two ("The particulate...") and three (A charcoal cartridge...").

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   NONE

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change is administrative in nature. These options were included standard when the monitor for noble gas was purchased, but were never placed into service. A dedicated particulate and iodine filter is used by the station to monitor these types of releases.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-93-33

Turbine First Stage Pressure Scram Bypass Setpoint Change

DESCRIPTION:

This change decreased the first stage turbine pressure scram bypass setpoint to be consistent with current cycle analysis. Current analysis states that these scrams may be bypassed below 45% rated thermal Power.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

ACCIDENT	UFSAR SECTION
Turbine load reject Without Bypass	15.2.2.1
Turbine trip without bypass	15.2.3.2

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change conservatively decrease the turbine 1st state pressure scram bypass from 400 psi (TS 3.1-3 - less than 400 psi) to 350 psi. By decreasing this pressure to approximately 350 psi it ensure that the TCV, TSV and EHC low pressure scrams are active above 400 psi, 1st state turbine pressure. This ensures that the Minimum Critical Power Ratio remains well within the analysis during this transient.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-93-30
Interim Procedure

DESCRIPTION:

Procedure giving guidance on actions to take on loss of fuel pool cooling.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

ACCIDENT	UFSAR SECTION
Loss of Fuel Pool Cooling	9.1.3.3

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the condition described in the UFSAR (eg. complete loss of fuel pool cooling) and the actions taken to mitigate are the limiting steps in this procedure. All other actions taken in this procedure will only serve to mitigate the possibility of the UFSAR conditions from occurring.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-93-31
ALARA Dose Reduction Request 93-014

DESCRIPTION:

Installed lead shielding on the fourth level of the drywell to "shadow" shield lines 1(2)-1403,4-10" with the weight of the lead supported by the 654' 1-18" gallery steel.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   NONE

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because based on answers to questions 5 and 6, this change does not adversely impact systems or functions to create a possible accident or malfunction different than already evaluated in the UFSAR. The change is only in place during Unit shut down. Sargent & Lundy has evaluated the loading configuration desired for the lead shielding and found that the gallery steel will support it without exceeding its original design.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-93-028
ALARA Dose Reduction Request 93-019

DESCRIPTION:

Installed lead shielding at biological shield was penetrations N11 "A" and "B".

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   NONE

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-93-035
M04-2-87-059A/B Construction Test

DESCRIPTION:

This procedure describes the steps to vary reactor water level with the reactor vessel defueled and the +8 low Rx water level trips bypassed in order to obtain reference data to calibrate the Rx level instrument action.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the accidents analyzed in the UFSAR pertaining to a loss of reactor coolant assume that fuel is present in the vessel. Under the present plant conditions the reactor vessel is defueled. Therefore, no fuel rod overheating and subsequent release of fission products can occur from lowering vessel level. With no fuel present the low level scram is not required to be in effect.

   Also, under the present plant conditions primary containment is not required to be operable by Tech Specs and the Group II and Group III isolations are not required to be in effect.

The reactor building vent isolation, SBGTS auto start and control room vent isolation protect plant personnel and the public from a release of radiation due to fuel damage. With no fuel in the vessel, no fuel damage can occur from lowering vessel level.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no fuel is present in the vessel and therefore there is no possibility of damaging fuel by lowering reactor water level.

SE-93-029
Interim Procedure # 062

DESCRIPTION:

Updated Procedure QOS 7500-4, "Standby Gas Treatment System Auto Initiation and Reactor Building Ventilation Auto Isolation." Two LER/DVR references were added and two precautions were added that address the concerns in the LER/DVRs. At the end of the procedure a step was changed to return both trains of SBGT to the PRIMARY mode of operation.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   The Standby Gas Treatment System is not physically changed by this procedure change. The operation of the system is the same, therefore this procedure change will not affect any of the accident scenarios.

   Provisions are made in the test procedure to restore the system to the recommended status in the event of the contingencies referenced in the listed LERs.

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the Standby Gas Treatment System is available to mitigate the consequences of an accident. The operation of the SBGTS will not change by this procedure change. The SBGTS procedure change will not create the possibility of a different type of accident, not described in the UFSAR.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-93-040
QCOP 1600-4 Torus Pressure Relief Through Reactor Building Vent System

DESCRIPTION:

Clarified requirements for sampling and analysis prior to venting the Primary Containment.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because for accidents evaluated in the UFSAR, no containment venting is analyzed to be required to deal with the containment pressure response to the accident. Containment venting during normal operation will be in response to expected gas expansion during heatup or loss of drywell cooling transients that do not alter containment activity and therefore cannot impact offsite release rates. This change provides specific direction to the operator so that containment activity can be adequately evaluated prior to the start of venting but does not alter the fact that the release will be monitored continuously and can be terminated if it approaches release rate limitations. Since the change does not alter system configuration or use, but simple more clearly defines prerequisites, it cannot create the possibility of an accident or malfunction of a type different from those evaluated in the UFSAR.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the basis for this procedure change is to establish a value that will not result in a trip of the Reactor Building Ventilation System Isolation. That trip setpoint is set conservatively low to comply with this Tech Spec. Section. Since this change is still bounded by an automatic plant setpoint that remains unchanged and is derived to prevent exceeding Tech Spec values, the change does not reduce the margin of safety.

SE-93-41
QCOP 1600-1, Drywell Pressure Relief Through SBGT Procedure

DESCRIPTION:

Clarified requirements for sampling and analysis prior to venting the Primary Containment.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because for accidents evaluated in the UFSAR, no containment venting is alienist to be required to deal with the containment pressure response to the accident. Containment venting during normal operation will be in response to expected gas expansion during heatup or loss of drywell cooling transients that do not alter containment activity and therefore cannot impact offsite release rates. This change provides specific direction to the operator so that containment activity can be adequately evaluated prior to the start of venting but does not alter the fact that the release will be monitored continuously and can be terminated if it approaches release rate limitations. Since the change does not alter system configuration or use, but simply more clearly defines prerequisites, it cannot create the possibility of an accident or malfunction of a type different from those evaluated in the UFSAR.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the basis for this procedure change is to establish a value that will not result in a trip of the Reactor Building Ventilation system Isolation. That trip setpoint is set conservatively low to comply with this Tech Spec. Section. Since this change is still bounded by an automatic plant setpoint that remains unchanged and is derived to prevent exceeding Tech Spec values, the change does not reduce the margin of safety.

SE-93-42
QCOP 1600-3, Drywell Pressure Relief Through
Reactor Building Vent System Procedure

DESCRIPTION:

Clarified requirements for sampling and analysis prior to venting the Primary Containment.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because for accidents evaluated in the UFSAR, no containment venting is analyzed to be required to deal with the containment pressure response to the accident. Containment venting during normal operation will be in response to expected gas expansion during offsite or loss of drywell cooling transients that do nota alter containment activity and therefore cannot impact offsite release rates. This change provides specific direction to the operator so that containment activity can be adequately evaluated prior to the start of venting but does not alter the fact that the release will be monitored continuously and can be terminated if it approaches release rate limitations. Since the change does not alter system configuration or use, but simply more clearly defines prerequisites, it cannot create the possibility of an accident or malfunction of a type different from those evaluated in the UFSAR.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the basis for this procedure change is to establish a value that will not result in a trip of the Reactor Building Ventilation System Isolation. That trip setpoint is set conservatively low to comply with this Tech Spec. Section. Since this change is still bounded by an automatic plant setpoint that remains unchanged and is derived to prevent exceeding Tech Spec values, the change does not reduce the margin of safety.

SE-91-333
M4-2-87-51C, Q87844-6.04

DESCRIPTION:

Installed new cables ECN 04-0018SE in associated 901-53, -54, -55, -56 and 901-34 panels. Installation was to include all associated new conduit and supports as required per ECN 04-00165E.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   Station Fire UFSAR SECTION 10.6

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because all required fire watches will be established to meet Tech Spec requirements. All penetration fire barriers will be restored in accordance with applicable plant procedures to maintain USFAR 10.6 requirements. System operations will not be affected by installation of these cables.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-92-129
M04-0-91-015B, Q98572-6.01

DESCRIPTION:

This work package removed the Makeup Demineralizer (MUD) System piping and components that are currently abandoned. The portable trailer system replaced the MUD's in supplying makeup demineralized water to both nuclear units.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   Instrument Air Failure UFSAR SECTION 9.3-9, 9.3-10

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the MUD system has been inoperable for 2-3 years. In that time, a portable trailer demineralizer system ash been used to generate makeup water for the nuclear units.

   Removing the inoperable MUD system piping will improve housekeeping and reduce hazards associated with the current incomplete installation of M04-0-87-003. The ECN addresses temporary measures required to remove the MUD equipment from interfacing plant systems that are retained.

   These features of the modification enhance plant personnel and equipment safety and; therefore, make the probability of an unanalyzed accident less likely.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the MUD system removal will not adversely affect Reactor Water Chemistry. Alternative methods will continue to supply high quality demineralized make up water. Sampling and monitoring equipment is not adversely affected.

SE-91-79
M4-2-84-36F, Work Package #Q95903-6.01

DESCRIPTION:

This safety evaluation was for the review of Work Package Q85903-6.01 - Installation of electrical supervision for the Unit 2 O2 system Electro-Manual Pilot Valve.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   Fire UFSAR SECTION 10.6

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because Section 10.6 of the UFSAR does not specifically identify which fire protection detection systems are required to have electrical supervision, only that "all alarm circuits are either electrically supervised or are tested to assure operability." The use of limit switches with two form C contacts, one pair of which is to be rewired and used for the original design intent, does not present any new credible accidents from those previously analyzed.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-99
M4-2-84-36F, Work Package #Q85903-6.02

DESCRIPTION:

This Safety Evaluation was for the review of Work Package Q85903-6.02 - Installed miscellaneous equipment, associated cable installation and terminations for electrical supervision on the Unit 2 CO2 system Electro-Manual Pilot Valve.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   Fire UFSAR SECTION 10.6

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because Section 10.6 of the UFSAR does not specifically identify which fire protection detection systems are required to have electrical supervision only that "all alarm circuits are either electrically supervised or are tested to assure operability." Installation of cables and miscellaneous equipment associated with the addition of electrical supervision for the Unit 2 CO2 System Electro-Manual Pilot Valve will not affect the operation of the existing equipment or the fire protection system. Therefore, no new credible accidents are being introduced by this change.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

M4-1/2-82-9

DESCRIPTION:

Replaced GECO 4020 Computer with Honeywell 4500 Computer, including peripheral equipment.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because neither the process computer or associated peripherals are evaluated in the FSAR. Neither is required for the operation of the plant safety systems.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the process computer is a completely isolated system and will not create any possibility for an accident or malfunction of a different type than previously.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the installation of a new process computer is not the basis for any Tech. Spec. safety margin. The addition of this modification will indirectly increase the safety margin in that will provide the operators with a more updated means for obtaining plant data.

M-4-0-84-14A, M-4-0-84-14B, M-4-0-84-14C,
M04-0-84-016, M04-1(2)-84-036, M-4-1-84-36J,
M04-1-84-37A, M04-2-84-37A, M04-1-84-037B,
M04-2-84-037B, M04-2-84-037C, M04-2-84-037D,

DESCRIPTION:

Installed fire suppression and detection systems in several areas of the plant.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because fire suppression and detection is not classified as Safety Related in the FSAR. Seismic installation of equipment ensures adequate operation of existing safety equipment and safety related equipment in the immediate area of installation.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the installation does not interfere with any existing safety systems.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because suppression and detection is not Safety Related. The reliability of the Fire Protection system is increased by providing this additional suppression and detection.

DESCRIPTION:

Cables for Unit 1 were pulled in preparation for installing modification M04-1-87-011. This modification was incompleted and the pulled cables were abandoned in place. Verification of each MSIV to close on demand could still be accomplished; however, the MSIVs had to be disabled as a group. This is the present procedure for verifying MSIV closure.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because incompleting this modification does not alter the existing system. Cables have been pulled and will be abandoned in place. Efficiency of MSIV maintenance and testing will remain the same, and normal operation of the MSIVs is not affected. Therefore, the possibility of any new accident of equipment malfunction is not created as a result of incompleting this modification.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-332
M4-1-87-51C, WR #Q85559-6.08

DESCRIPTION:

Modification test for the ringback horn time-out relay and silence pushbuttons on the 901-55 and 901-56 panels.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None.

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the annunciator system is not specifically described in the UFSAR. This modification test will test the ringback and silence functions of the annunciator system. This modification test will use the annunciator system pushbuttons to verify proper system operation. These pushbuttons are not described in the UFSAR and do not interact with any other plant systems or functions.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-308
M4-1-87-51C, Q85559-6.07

DESCRIPTION:

Modification test for ringback horn time-out relay and silence pushbuttons on panels 901-53 and 901-54.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the annunciator system is not described in the UFSAR. This modification test will test functions of the annunciator system only. This modification test will use the annunciator systems "test" pushbuttons to verify proper system operation. These pushbuttons are not described in the UFSAR and do not interact with any other plant systems or components.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-303
M4-1-87-51C, Q85559-6.06

DESCRIPTION:

Modification test for power feeds of annunciator systems in panels 912-2, 7, 8 and 901-55.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the annunciator system is not described in the UFSAR. This modification test will test functions of the annunciator system only. This modification test will use the annunciator systems "test" pushbuttons to verify power is restored to the system. These pushbuttons are not described in the UFSAR and do not interact with any other plant systems or components.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-46
M4-1-87-51C

DESCRIPTION:

Modification test for M4-1-87-51C. Test evaluated annunciator functions and verified the functions meet the requirements of NUREG 0700, and the mod approved letter.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the annunciator system is not described in the UFSAR. This modification test will test system functions of the annunciator system only. This modification test make use and test the annunciator systems test pushbuttons. Those pushbuttons are not described in the UFSAR. These pushbuttons do not interact with any other plant systems or components.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-55
Modification Test for M4-1-87-51C, DCRDR Annunciator

DESCRIPTION:

Modification test for M4-1-87-51C. Test evaluated annunciator functions and verified that functions met the requirements of NUREG 0700, and the mod approval letter.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the annunciator system is not described in the UFSAR. This modification test will test functions of the annunciator system only. This modification test makes use of and test the annunciator systems "test" pushbuttons. These pushbuttons are not described in the UFSAR. These pushbuttons do not interact with any other plant systems or components.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-236
M4-1-87-51C, Q85559-6.05

DESCRIPTION:

Testing of annunciator panel 912-8. Test evaluated annunciator functions and verified that functions met the requirements of NUREG 0700, and the mod approval letter.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the annunciator system is not described in the UFSAR. This modification test will test functions of the annunciator system only. This modification test makes use of and tests the annunciator systems "test pushbuttons." These pushbuttons are not described in the UFSAR. These pushbuttons do not interact with any other plant systems or components.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-272
M4-1-87-51C, Q85559-6.09

DESCRIPTION:

Modification test for M4-1-87-51C. Test evaluated annunciator ringback time-out function.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the annunciator system is not described in the UFSAR. This modification test will test functions of the annunciator system only. This modification test makes use of the annunciator systems "test" pushbutton, and will test the systems time-out ringback relay. This pushbutton and relay are not described in the UFSAR. These items don't interact with any other plant systems or components.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-294
M4-1-87-51C, Q85559-6.03

DESCRIPTION:

Modification test for panel 912-2.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None.

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the annunciator system is not described in the UFSAR. This modification test will test functions of the annunciator system only. This modification test makes use of the annunciator system only. This modification test makes use of and tests the annunciator systems "test" pushbuttons. These pushbuttons are not described in the UFSAR. These pushbuttons do not interact with any other plant systems or components.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-295
M4-1-87-51C, Q85559-6.10

DESCRIPTION:

Modification test for annunciator system ringback time-out relay and "silence" pushbuttons on panels 912-2 and 912-8.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the annunciator system is not described in the UFSAR. This modification test will test "ringback" and "silence" functions of the annunciator system. This modification test will use the annunciator systems pushbuttons to verify system functions. These pushbuttons are not described in the UFSAR and do not interact with any other plant systems or functions.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

DESCRIPTION:

The bellows elements could not be replaced with identical units without disassembly of the process pipe and its anchors. However, a replacement design concept was implemented that utilized longitudinal split bellows elements that are assembled in-situ. Local leak rate testability was restored by installing an additional bellows assembly concentric with and just outside of the containment boundary bellows. This replacement concept has been previously qualified by prototype test for CECo by NUTEC under Project XCE-17/CEC-37.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the purpose of this modification is to repair the flexible metallic bellows at penetration X-12 to better meet the performance objectives of the primary containment system as stated in Section 5.2.1 of the FSAR. Therefore, the probability of primary containment failure due to a pressure transient as described in the FSAR is reduced.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because no new types of accidents or malfunctions of a different type than those previously evaluated in the FSAR are created. The purpose of this modification is to reduce leakage at penetration X-12 by replacing the existing bellows assembly which has been found to be leaking.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the margin of safety is increased as a result of this modification as defined in the basis of Technical Specification Section 3.7.A. By increasing the integrity of primary containment, the possibility of a breach in containment and resultant offsite releases in excess of 10CFR100 limits is decreased.

M-4-1(2)-89-074

DESCRIPTION:

Removed timer controls from the following units and replaced with photo sensing scheme:

Unit #1 Feedwater Pump AHU
Unit #2 Feedwater Pump AHU
Unit #1 MG Supply AHU-Filter 1B
Unit #2 MG Supply AHU-Filters 2A & 2B
Unit #1 East T.B. Supply AHU
Unit #2 East T.B. Supply AHU
Unit #1 West T.B. Supply AHU
Unit #2 West T.B. Supply AHU
Unit #2 Rx Bldg Supply AHU

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because roll-o-matic filters are not addressed in the FSAR and do not inpact accident probabilities.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because roll-o-matic filter failure does not impact accident possibilities with respect to the FSAR.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because it is not addressed in Tech. Specs.

SE-92-152
M04-1-91-032

DESCRIPTION:

Transferred the feed for the 1-1001-47 valve from 250 VDC MCC 1B to MCC 1A in order to provide adequate capacity margin for the 250V batteries. In addition, the feed for 1-2301-36 was also shipped to a different cubicle, on the same bus, to provide a space for the above move.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   Work will be done while the unit is shut down and in the E/F mode with no fuel in the vessel.

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the scope of work is being performed with the unit in refuel where the 1001-47 valve is not required for operation. No accidents of malfunctions are evaluated for this case. Also, the scope of work is scheduled during the outage when the fuel will not be in the RPV. Therefore, shutdown cooling is not required.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-549
Modification M04-2-91-034

DESCRIPTION:

This safety evaluation was written for the work instructions associated with the modification to add four additional cells to the Unit Two 250 VDC battery.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   Small break LOCA UFSAR SECTION 14.2.4

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the final phase of work involves the connection of the new rack to the existing 116 cell racks. This will require the U-2 250 VDC battery to be inoperable. This will not create a possibility of an accident or malfunction of a type different than those stated in the FSAR because the back-up systems for U-2 HPCI and U-1 RCIC will be fully operable. Those systems are stated in step 10. The requirements of Technical Specification 3.9.C.3, 3.5.E.2, 3.5.F.3, 3.5.C.2, C.5.C.3 will be met.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

DESCRIPTION:

The changes made by this modification involved upgrading the power feed to the RHR and Core Spray Emergency Air Handling Units. The existing cables were abandoned in place and new larger cables were installed following the routing points of the old cables, where feasible. These changes were made to increase the voltage levels at the loads under degraded voltage conditions.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

LOCA	SAR SECTION	14.2.4
Fire		10.7
Power bus loss of voltage		8.2.2

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because as discussed in the responses to questions 5 and 6, the modification has not effect on operating modes or equipment functions. The installation of new cable enhances the reliability of safety equipment powered through the cable, because it improves the voltage at the load under degraded voltage conditions. Therefore, the modification would not create the possibility of an accident or malfunction of a type different from those evaluated in the FSAR/UFSAR.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

DESCRIPTION:

This modification upgraded the power feed from Switchgear Bus 18 to MCC 18-2 by paralleling the existing conductors with the same size and type of conductors. The modification is a result of Sargent & Lundy (S&L) Calculation 8913-67-19-1, Revision 0, which indicates that there might be a problem with insufficient voltages for various electrical loads during degraded voltage conditions. To the extent possible, the new cables were routed through the same routing points as the existing power feeds. All of the affected cable trays were evaluated for seismic and thermal loading and conduits were installed where it is not feasible to use existing cable trays or conduits.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

LOCA	SAR SECTION	15.6.5
Fire		9.5.1
Power bus loss of voltage		8.0

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the modification has no effect on operating modes or equipment functions. The installation of the new power feed configuration enhances the reliability of MCC 18-2 under degraded voltage conditions by improving the voltage level at the Motor Control Center (18-2). Therefore, the modification would not create the possibility of an accident or malfunction of a type different from those evaluated in the FSAR/UFSAR.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

DESCRIPTION:

This change upgraded the existing control circuits for the Residual Heat Removal (RHR) System LPCI injection valve 1-1001-29A and RHR shutdown cooling valve 1-1001-50. This is being done to assure that the contactors associated with these two valves will have sufficient terminal voltage to pick up and actuate the valves. These changes helped resolve degraded voltage concerns.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

LOCA	SAR SECTION	15.6.5
Fire		9.5.1
Power bus loss of voltage		8.0

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the modification has no effect on operating modes or equipment functions. The installation of the control circuit upgrade, enhances the reliability of safety equipment because it increases the voltage level at the contactor could under degraded voltage conditions. Therefore, the modification would not create the possibility of an accident of malfunction of a type different from those evaluated in the FSAR/UFSAR.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-92-201
Work Request Q02227

DESCRIPTION:

Installed three one inch thread-o-lets at various locations on the CRD Repair Room Sink drain line. The drain line runs from the Reactor Building, through the Extraction Steam Pipeway, to the Chemical Waste Tank in Radwaste.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

Loss of coolant	UFSAR SECTION 15.6.5, 15.6-30
Refueling	UFSAR SECTION 15.7.2

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the design function of the drain line is not altered by the installation of the thread-o-lets. Since the thread-o-lets are welded to the drain line, they will have the same integrity as the pipe. This installation will facilitate cleaning of the drain line which will result in better flow through the drain line and reduce the source term in the line. Threaded plugs will be installed in the thread-o-lets during normal operation of the drain line.

If the welded connections on one or more of the thread-o-lets were to fail or if one or more of the threaded plugs fell out, Secondary Containment test results, station surveillance QTS 160-5, indicate that Secondary Containment can be maintained with an induced leak equivalent to a four inch hole (surface area of 12.566 square inches).

The failure of all three of the thread-o-lets would be equivalent to a hole with a surface area of approximately 2.356 square inches. This is well below the size of the leak induced during the Secondary Containment test. Thus, Secondary Containment integrity will be maintained.

The installation of the thread-o-lets does not adversely impact systems or functions which create the possibility of an accident or malfunction.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-92-113
Upgrade to U2 Main Power Transformer Deluge System for Phase 11 of Fire Protection Modification (Q88133)

DESCRIPTION:

This partial Modification M4-2-84-36A relocated the Electrical Supervision and alarms for Unit 2 Main Power Transformer Deluge System from the Main Control Room annunciators to the XL3 Central Monitoring System.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

Transformer Fire	UFSAR SECTION 10.6 References Updated Fire Analysis 4.15.1 Design Basis Fire

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because during the Design basis accident, the Unit transformer is lost due to fire. The purpose of the detection equipment is to detect and quickly extinguish a fire from the transformer. The compensatory measures of a fire watch will be used for detection of a fire until the transformer detection system is returned to service, and the system is Op-Authorized.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-92-114
Upgrade the RAT and UAT Deluge System for Phase 11
of Fire Protection Modification (Q88135)

DESCRIPTION:

This partial Modification M4-2-84-36B relocated the Electrical supervision and alarms for Unit 2 RAT and UAT Deluge Systems from the Main Control Room annunciators to the XL3 Central Monitoring System.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

Transformer Fire	UFSAR SECTION 10.6 References Updated Fire Analysis 4.15.1 Design Basis Fire

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because during Design basis accident, the Unit transformer is lost due to fire. The purpose of the detection equipment is to detect and quickly extinguish a fire from the transformer. The compensatory measures of a fire watch will be used for detection of a fire until the transformer detection system are returned to service, and the system is Op-Authorized.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-93-46
QCOS 201-4, Rev. 1

DESCRIPTION:

Enhanced per writers guide. Added new prerequisites, precautions, limitations and actions, procedure steps, attachments, notes and cautions.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the prerequisites added to procedure as listed by the number used in the procedure under PREREQUISITES section; D.2., only requires notification of personnel. D.4. only requires that pumps are available or that it has been determined are not necessary. D.10. only requires posting Reactor Vessel Thermocouples at the recorder. D.11 only verifies that the recorder is operating properly. D.12 nd D.13 only sets up the computer trend with alarm points and display to aid the operator of temperature changes. D.22 thru D.26 only verifies all available ECCS Systems are operable, manual scram inserted, CRD Pumps secured, Adequate communications available, required valves taken out of service.

   D.33 only establishes a temperature band. D.35 only allows the test director to list any valves placed in an off-normal position and provides tracking of off-normal positions. D.36 is only a checkoff if pre-test section was performed. D.38 only insures hoses are installed and secured for venting Recirc pump seals. D.39 only insures MM has been notified and are prepared to install Excess Flow Check Valves

when required. D.40 only reviews Jumper/Block Log to make sure none exist that will affect this test. Therefore they do not create the possibility of a new accident of malfunction.

The precautions E.4., E.5., E.6. as listed by number used in the procedure under PRECAUTIONS section only provides the operator with additional information for plant and personnel safely while performing the procedure. Therefore they do not create the possibility of a new accident or malfunction.

The limitations and actions F.2., F.6. thru F.9., and F.11 as listed by number used in the procedure under LIMITATIONS AND ACTIONS section only provides the operator with limitations and actions to take while performing the procedure. Therefore they do not create the possibility of a new accident or malfunction.

The steps as listed by number used in the procedure under PROCEDURE section; H.1. only secures SDC to start heatup of Reactor Water. H.2. gives the method to begin the heatup. H.5. only has the operator notify RP for Drywell access limitations. H.8. only provides options for controlling temperature. H.11. only provides the steps to maintain the temperature per Attachment H(I). H.12. only verifies the temperature within limits. H.13. only provides the actions necessary and required to be performed in rapid order to begin pressurization. H.14 only correlates Reactor Pressure with Heise Gauge pressure. H.15 only has the operator record information. H.18 only added to ensure MM reinstalls Recirc Excess Flow Check Valves after seals are vented. H.22 only provides the operator with the method to control temperature depending upon which area needs increasing or decreasing. H.23 only provides the operator with the steps to maintain pressure and control temperature. H.26. only provides more information when pressurizing to 1000 psig. H.26.b. of step H.26 only has the operator close level control valves to prevent leak through. H.28 is just a double check to confirm no leakage before continuing. H.34 only has the operator available to operate valves. H.35 only provides the operator with the method to control temperature depending upon which area needs decreasing during cooldown. H.36 provides actions that need to be performed when Reactor Pressure drops to <10 psig to hold parameters constant. H.37 thru H.44 only notifies EA to return to normal duties, terminate logging of Reactor Parameters, place shutdown cooling in operation, and removes copies of Attachment H(I). Therefore they do not create the possibility of a new accident or malfunction.

The attachments as listed by Attachment in procedure under ATTACHMENTS: Attachment C and D were taken out of Attachment B and made into 2 separate Attachments for individual units, Attachment E and F which was the existing Attachment C and made into 2 separate Attachments for individual units and new Attachments G, H, and I were added for recording special valves and data only. Therefore they do not create the possibility of a new accident or malfunction.

Also added notes and cautions throughout procedure so the operator is aware of any special situations before performing the step. Therefore they do not create the possibility of a new accident or malfunction.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-93-47
QCOS 201-7, Rev. 1

DESCRIPTION:

Enhanced per Writers Guide. Added new prerequisites, precautions, limitations and actions, procedure steps, attachments, notes and cautions.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the prerequisites added to procedure as listed by the number used in the procedure under PREREQUISITES section; D.1.d, only provides a check off for which test is being performed 1000 or 1110 psig. D.2 only requires notification of personnel. D.4 only requires that Pumps are available or that it has been determined are not necessary. D.10 only requires posting Reactor Vessel Thermocouples at the recorder. D.11 only verifies that the recorder is operating properly. D.12 and D.13 only set up the trend with alarm points and display to aid the operator of temperature changes. D.15 and D.16 only provide option for recalibration of a Relief Valve only if the 1110 psig test is being performed.

D.19.a and b only added to defeat AO 1(2)-220-47 to remain open irregardless of switch position. D.27.d only added to take 1(2)-220-50, Reactor Continuous Head Vent out of service. D.37 only establishes as high a temperature band as possible before starting test. D.42 only insures hoses are installed and secured for venting Recirc Pump seals. D.43 only insures MM has been notified and are prepared to install Excess Flow Check Valves when required. D.44 only reviews Jumper/Block Log to make sure none exist that will affect this test. Therefore they do not create the possibility of a new accident or malfunction.

The precaution E.7 is listed by number used in the procedure under PRECAUTIONS section only provides the operator with additional information to prevent violating the temperature at the Lower Head Region while performing the test. Therefore it does not create the possibility of a new accident or malfunction.

The limitations and actions F.7, F.8, F.9, and F.11 as listed by number used in the procedure under LIMITATIONS AND ACTIONS section only provides the operator with limitations and actions to take while performing the procedure. Therefore they do not create the possibility of a new accident or malfunction.

The steps as listed by number used in the procedure under PROCEDURE section; H.1 only secures SDC to start heatup of Reactor Water. H.2.b only provides an alternate method to increase Reactor Temperature. H.5 only has the operator notify RP for Drywell access limitations. H.11 only adds additional steps to maintain the temperature per the new attachment Attachment H(I) and to pump the DWEDSP to minimum. H.12 only verifies the temperature within limits. H.13 only provides the actions necessary and required to be performed in rapid order to begin pressurization. H.14 only correlates Reactor Pressure with Heise Gauge pressure. H.15 only has the operator record information. H.18 only added to ensure MM reinstalls Recirc Excess Flow Check Valves after seals are vented. H.23 only provides the operator with the method to control temperature depending upon which area needs increasing or decreasing. H.24 only provides the operator with the steps to maintain pressure and control temperature. H.32 only has the operator available to operate valves. H.33 only provides the operator with the method to control temperature depending upon which area needs decreasing during cooldown. H.34 provides actions that need to be performed when Reactor Pressure drops to <10 psig to hold parameters constant.

H.37 only terminates logging of Reactor Parameters, H.41 and H.42 only place shutdown cooling in operation and removes copies of Attachment H(I). Therefore, they do not create the possibility of a new accident or malfunction.

The attachments as listed by Attachment in procedure under ATTACHMENTS: Attachment C and D were taken out of Attachment B and made into 2 separate Attachments for individual units, Attachment E and F which was the existing Attachment C and made into 2 separate Attachments for individual units, Attachment G was Attachment D, and new Attachments H and I were added for recording special valves and data only. Therefore they do not create the possibility of a new accident or malfunction.

Also added notes and cautions throughout procedure so the operator is aware of any special situations before performing the step. Therefore, they do not create the possibility of a new accident or malfunction.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-93-48
QCOS 201-8, Rev. 1

DESCRIPTION:

Revised existing procedure to add prerequisite to check Temporary Alteration log prior to performing test and updated Attachment E(F) walkdown checklist.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this revision only adds a prerequisite to check the Temporary Alteration log to ensure no jumper or block is installed that will affect the operation of equipment during the hydrostatic test.

   The walkdown checklist was updated to show actual components that are checked during the high pressure leak test part of this surveillance. Therefore this revision does not adversely change or impact systems or functions so as to create the possibility of an accident or malfunction of a type different from those previously evaluated in the UFSAR.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

DESCRIPTION:

Changes implemented by this partial modification included replacement of the existing condensing chamber with a new condensing chamber. The Yarway column was replaced by a new condensate reservoir. The variable reference leg was rerouted inside the drywell. The cold reference leg piping from the new condensing chamber and condensate reservoir was relocated to the reactor building holding the vertical drop in the drywell to a maximum of two feet. The new reference let piping was routed outside the drywell and tied back into the existing instrument piping upstream of the instrument racks. The existing containment penetration (X-108) was used for the rerouted cold reference legs.

The purpose of this modification is to minimize the effect of reference column water boil-off in a post-LOCA or high drywell temperature condition on the "A" loop reactor vessel water level instrumentation system.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

Small Line Break LOCA	SAR SECTION 5.2.2
Main Steam Line Break Outside Drywell	14.2.3.4
Loss of Coolant Accident	14.2.4/5.2.3

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the function and setpoints associated with the RWVLIS remain unchanged. The RVWLIS interfaces with no new systems. The system is composed of passive components (i.e., piping and chambers) exposed to the same reactor coolant system operating parameters (i.e., temperature and pressure) as the pre-modified system.

   There is, therefore, no new failure mechanism or mode that could result in an accident or malfunction of a type different from those evaluated in the UFSAR.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-91-300
P04-1(2)-91-066, Q63253

DESCRIPTION:

Installed printed circuit card which will disarm the zone computer.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the refuel bridge will operate the same with this change as it did when the jumper was installed to bypass the zone computer. Admin controls assure that fuel bundles do not interact with objects in the fuel pool. This is per the original design of the refuel bridge.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

P04-1(2)-91-066
ECN 04-00341E, 04-00342E

DESCRIPTION:

The existing refuel bridge design includes a permissive zone computer which prevents running the grapple into a fuel pool or transfer canal wall. While the intended purpose of the permissive zone computer may be worthwhile, its design does not provide the necessary flexibility for operation in a two pool plant or within the fuel pool transfer canal. Additionally, the permissive zone computer has a high failure rate which results in unnecessary time lost during refueling activities. This MPC removed the permissive zone computer, a travel override button and replaced two PC cards per unit in order to bypass the travel override system on each refuel bridge. The associated Safety Travel Interlock alarm at the refuel bridge console was also disabled. This will provide the necessary flexibility for operation in the opposite unit's fuel pool or within the fuel pool transfer canal.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   Refueling Accident SAR SECTION 14.2.2

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this MPC will replace two PC cards per unit in order to bypass the travel override system on each refuel bridge. This change will not adversely impact systems or functions which will create the possibility of an accident or malfunction of a type different from those evaluated in the SAR. Existing administrative controls are adequate to prevent the refuel bridge grapple from being run into either the fuel pool transfer canal or the fuel pool walls.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

SE-93-45
FSAR 4.2.2.1.1.2

DESCRIPTION:

Revised section 4.2.2.1.1.2 of the UFSAR to add the termination of the BLTA test program at EOC 12, giving explanation for terminating the BLTA test program one cycle early, EOC 12 rather than EOC 13.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

   None

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the UFSAR change updates the UFSAR section 4.2.2.1.1.2 stating the BLTA project was terminated at EOC 12 rather than EOC 13 due to observed spot spallation (localized pitted corrosion) on four of the six BLTA rods. The change in no way adversely impacts systems or functions so as to create the possibility of an accident on malfunction of a type different from those evaluated in the UFSAR.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

M4-1-91-030
ECN 04-00775E

DESCRIPTION:

This design provided improved generator backup relay protection while backfeeding power through the Main Power Transformer. In addition, detection of a short-circuit condition in the Main Power Transformer is provided for by the protective devices. The added protection will trip the backup lockout relay if the generator primary protection system fails. New relays are being installed for overcurrent protection for the Unit Auxiliary Transformer (UAT) during backfeeding through the Main Power Transformer (MPT). This modification was installed to increase the flexibility of the unit's electrical distribution system during unit outages.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

Load Rejection	SAR SECTION	15.2.2
Turbine Trip (without bypass)		15.2.3

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the generator backup short circuit protection system detects a short condition and trips the backup lockout relay if the generator protection system fails. This modification enhances this capability. Relays and other equipment have been selected to be suitable for the applications. Backfeeding power will only be performed with the turbine off line. Relays and circuits associated with backfeeding power will not significantly increase the possibility of a turbine trip during normal operation.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

M4-1/2-84-8 and M4-1/2-84-8A

Diesel Fire Pump Cranking Batteries and Chargers

DESCRIPTION:

This modification replaced the existing lead-acid diesel fire pump starting batteries and associated battery chargers with nickel-cadmium batteries and appropriate battery chargers. The new installation consists of fully enclosed battery/charger systems for each fire pump.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the new batteries/chargers are chosen specifically for diesel fire pump service to provide more reliable operation, therefore, probability of an occurrence or malfunction will be reduced. Any consequences of an accident will remain the same as previously evaluated.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this modification is a one-for-one replacement of existing equipment (batteries and chargers). Therefore, an accident or malfunction will be the same type as previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the new equipment will provide longer service life; therefore, the units will be in a Limiting Condition for Operation less often, and the margin of safety maintained.

SE-92-198
Temporary Alteration

DESCRIPTION:

This Temporary Alteration connected a strip chart recorder at two locations to monitor and record certain parameters in the HPCI System during surveillance testing. One strip chart recorder was connected to the vacuum breaker line test taps, and one recorder was connected at the 902-3 panel.

SAFETY EVALUATION SUMMARY:

1. The change described above has been analyzed to determine each accident or anticipated transient described in the UFSAR where any of the following is true:

   - The change alters the initial conditions used in the UFSAR analysis.

   - The changed structure, system or component is explicitly or implicitly assumed to function during or after the accident.

   - Operation or failure of the changed structure, system, or component could lead to the accident.

   The accidents which meet these criteria are listed below:

ACCIDENT	UFSAR SECTION
Loss of Coolant Accident	15.5, 15.6
Inadvertent HPCI Injection	

   For each of these accidents, it has been determined that the change described above will not increase the probability of an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because HPCI turbine speed and pressure indicators have no automatic safety system actuations associated with them. They are not considered in the UFSAR single failure criteria. Because the strip chart recorders uses non-safety related power, fuses will also be used to provide isolation between safety and non-safety related power. The Flow Indicating Controller will not be affected due to parallel circuitry and high impedance resistor within recorders themselves. Additionally, the chart recorder failure mode is that of an "open circuit" assuring no short would occur throughout the logic circuits. The pressure transducers and

tubing used for the vacuum breaker line will monitor only pressure differentials across the vacuum breaker check valves. The transducers are sized to assure the pressure integrity of the exhaust line is maintained. This will not affect the operation of the check valves. There are no identified failure modes or interactions more severe than a steam line break or inadvertent injection. Therefore, the potential failures are still bounded by the UFSAR analysis.

3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

M-4-1(2)-78-18

DESCRIPTION:

Modification M04-1-78-018 consisted of replacing existing supports and upgrading existing equipment to the downcomer lateral bracing, downcomer/vent header stiffeners, downcomer longitudinal bracing, vent header deflector, T-Quencher installation and supports, SRV piping supports, spherical junction drain supports, ring girder drain holes, Thermo-wells, catwalk supports at ring girder and midbay, catwalk handrails and conduit reroute, ring girder reinforcements, Drywell/Torus vacuum breaker replacement, spray header supports, HPCI Turbine exhaust, HPCI Turbine drain pot support, SRV piping, SRV penetrations and ring header reinforcements, RCIC Turbine exhaust, RCIC drain pot support, RHR return line supports, Torus miter joint saddles, monorail removal, conduit reroute work, ECCS suction header reinforcement, SRV drain line vacuum breakers and piping penetration reinforcements. This modification was in compliance with NRC order number 46FR9312, and to assess the suppression pool hydrodynamic loads in accordance with NEDO-24583-1, NEDO 21888 and Appendix A of NUREG-0661.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because this modification does not increase the chances or consequences of an occurrence as previously evaluated since the purpose of this modification is to upgrade the existing structural support capability.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the systems affected by this modification have design functions to standby to operate in the event of a loss-of-coolant accident. This modification does not alter the intended design functions and does not create a possibility of a different type accident of malfunction.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this modification does not affect any conditions as defined in the basis of the Technical Specifications for ECCS.