



Commonwealth Edison

Quad Cities Nuclear Power Station

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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 January 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

Robert J. Walsh
Tech Staff Supervisor

RJW/dak

Enclosure

cc: A. B. Davis, Regional Administrator
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Setpoint Change # 521

DESCRIPTION:

Increased setpoints of TSH/L 1/2-5741-317 by approximately 0.3 to 0.4 Volts DC. This effectively raised the average Control Room temperature by about 3 degrees Fahrenheit during operation of the "B" train of Control Room HVAC.

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:

<u>ACCIDENT</u>	<u>UFSAR SECTION</u>
LOCA	15.6

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 this setpoint change will not cause the TSH/L or compressor that it controls to operate outside of their design constraints. The function and operation of the TSH/L and compressor will not be altered by this change so as to create any new interactions or operating modes. An increase of 3 degrees on average in the Control Room and emergency zone will not cause these areas to approach the lowest equipment failure temperature of 104 degrees Fahrenheit. The new average will be in the 70 to 80 degree band. Therefore, an accident different from those already evaluated cannot be created 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.

Recombiner Temperature Test

DESCRIPTION:

The purpose of this test decreased the 2B recombiner outlet temperature by: (1) altering dilution steam flow, and (2) preheater inlet temperature to the recombiner.

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 test will not affect the operation of the off-gas system or recombiner as long as the parameters listed in Limitations and Actions section are not exceeded. During the test, failure of the recombiner will be the same as existing conditions. This test will not be detrimental to the off-gas system. GE has been consulted for developing this test, and concurs with the actions described in the Limitations and Actions section, and with the test format.
3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

DESCRIPTION:

Cable tie-wrap has been installed around Terminal 11 of terminal block FF in Panel 901-32-1W. Temporary Alt is being processed to document on As Found condition.

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:

ACCIDENTUFSAR SECTION

Small Break LOCA

Chapter 15

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 tie-wrap has no affect on the circuit integrity of the ADS logic and also no affect on overall ADS system performance. The tie-wrap will prevent movement of the damaged terminal block during a seismic event thus prevent any electrical damage which could occur due terminal point contact with other components within the 901-32-1W panel. Therefore, there is no possibility of 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.

Temp Alt For Fermanite Repair on 2-1402-9B

DESCRIPTION:

Fermanite sealant was installed on the 2-1402-9B Core Spray Testable Check Valve in order to stop a leak at the actuator rod packing.

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:

ACCIDENTUFSAR SECTION

LOCA

Section 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 this change will not affect the operability of the check valve, or the Core Spray system. The added weight to the valve will not impact the seismic qualification of the valve, and the modified leak-off line will be capped following sealant injection.

The sealant injection will not alter the function of the check valve. A reoccurrence of the leakage would be similar to a packing leak and would also not alter the function of the check valve or the Core Spray system. Therefore, the change will not impact any system or function which would 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 installation of the fermanite sealant does not affect the operability or availability of the Core Spray system. The change prevents leakage from the check valve.

DESCRIPTION:

Updated drawings to reflect cable #12638 replacement. Original was BR/PVC insulated and was replaced under work request Q64774 with EPR/H insulated cable.

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:

<u>ACCIDENT</u>	<u>UFSAR SECTION</u>
LOCA Resulting from Piping Breaks Inside Containment	15.6.5

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 replacement of the power cable for MO-1-1402-38A does not create the possibility of an accident or malfunction different than those evaluated in the UFSAR. This cable performs the same function as the previous one, the only difference being the new one is environmentally qualified.
3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

DESCRIPTION:

A recorder was installed to monitor the input voltage and the trip voltage of Unit 1 Reserve RPS bus EPA 1AB-1. The duration of this recorder installation is one week. The recorder would only be hooked up when the reserve RPS bus is not needed. If dirty power is required from this reserve RPS bus, the recorder will be disconnected.

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 recorder would only be installed when the Unit 1 RPS reserve bus is not being utilized. When reserve power is needed, this recorder will be disconnected. Thus, this does not adversely impact systems or functions so as to create the possibility of an accident or malfunction mentioned 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:

Fermanite sealant was installed on the 2A RHR Pump Seal Cooler in order to stop a gasket leak. The seal will remain installed on the cooler until Q2R12.

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

LOCA
(Post Accident Cooling)

6.2 Containment Heat Removal

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 installation of the Fermanite seal rings will stop leakage from the 2A RHR Pump Seal Cooler shell flange. The seal will be installed on the flange and flange bolts. The rings are safety related nuclear grade and meet applicable equipment requirements. The additional weight added to the cooler does not significantly effect the seismic analysis. (SESR 4-1419).

The potential failure of the Fermanite ring would be similar to a valve bonnet bolts failure. As the material meets the required standards for the cooler, the probability of a failure is not increased. A failure of a bolt or ring could result in the reoccurrence of the leak, this would not prevent the RHRSW system from performing its design function. The potential of a reoccurring leak, effecting the RHR pump motor is not increased by installation of the sealant.

The temporary installation of the Fermanite sealant will not impact the RHR/RHRSW system functions, or the possibility of an accident or malfunction not 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. The installation of the Fermanite rings and sealant do not affect the availability of the RHRSW System. The temporary alteration prevents leakage from the seal cooler.

DESCRIPTION:

This modification is required as a result of CECO's response to NRC Generic Letter 89-16, "Installation of a hardened wetwell vent". As a result of this directive, CECO committed to install an augmented primary containment vent system (APCVS) at Quad Cities Station.

The APCVS is required to provide a vent path that will function under pressures up to and including the primary containment pressure limit (PCPL), and provide the control room operators with the capacity to prevent primary containment failure due to over pressurization. This vent is to mitigate the effect of the TW sequence (Loss of long term decay heat removal capacity). This mod will be split into (3) partial mod packages to separate the outage related and non-outage work. M04-2-90-003A - Unit 2. M04-2-90-003B - Non-outage common. M04-1-90-003A - Unit 1.

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 Augmented Primary Containment Vent System (APCVS) is designed to relieve Primary Containment pressure to avoid overpressurization and possible breach of the Primary Containment which may occur due to events which are beyond the design basis of the plant. The APCVS is designed and shall be operated so that the impact on existing systems or functions do not create the possibility of an accident or malfunction of a type different from those evaluated in the UFSAR/FSAR.
3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced. No sections affected thus the margin of safety is not reduced.

Modifications
M-4-1-84-036 C and E
M-4-2-84-036 B and C

DESCRIPTION:

The Fire Protection System Upgrades Modifications (M04-1-84-36, M04-2-84-36, M04-0-84-14 and M04-0-84-16) provided additional fire suppression and detection systems to comply with 10CFR50 Appendix R requirements and National Fire Protection Association (NFPA) code commitments from Appendix A to Branch Technical Position APCS 9.5-1. The work was divided into 12 phases with this work designated as partial modification M04-1-884-036C of Phase 11. It relocates the Electrical Supervision and alarms for the Unit 1 Turbine Oil Deluge System from the Main Control Room Annunciators to the XL-3 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:

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 installation does not interfere with any existing safety systems.
3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced. Suppression and detection is not Safety Related. The reliability of the Fire Protection System is increased by providing this additional suppression and detection.

DESCRIPTION:

The purpose of modification M04-2-87-003 partial A installed a prefabricated 8' x 16' room on elevation 647' 6" in the U2 Reactor Building. The room was erected to house Chemistry monitoring and data collection equipment associated with the Autoclave system and the reactor building sample panels. The room is equipped with normal lighting and 120 VAC power outlets. Also, the room receives a supply of clean demin water and instrument air via the sample panels. To provide an environment conducive to the operation of data collection equipment, an air conditioner maintains the room temperature at approximately 70 degrees Fahrenheit.

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 failure modes and effects analysis demonstrates no new accident or malfunctions are created by this modification. There is no safety related equipment adjacent to or within the rooms.
3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced. This modification introduces no changes to the Technical Specification basis. All conditions applicable to this modification are enveloped by existing basis analysis. The margin of safety is not reduced in any significant way as a result of this modification.

Modifications

M-4-1-88-061

M-4-2-88-061

DESCRIPTION:

Modifications M-4-1(2)-88-061 were performed on Unit 1 to improve the reliability of the existing torus water level monitoring system. Existing torus water level intermediate range transmitter 1-1626 and 2-1626 were designed to measure level from ± 25 inches of normal. This transmitter exhibited poor performance causing frequent false alarms and recalibration; and, due to the close proximity of the transmitter to the RHR heat exchanger, presented an ALARA concern during recalibration. Transmitter 1-1626 and 2-1626 feed intermediate Control Room level indicator 1-1602-3 and 2-1602-3 and level alarm unit 1-1602-6 and 2-1602-6. These modifications will remove existing intermediate range transmitter 1-1626 and 2-1626 to improve the existing torus water level monitoring systems. Then existing torus water level narrow range level transmitter 1-1602-9 and 2-1602-9 will be used to feed level indicators 1-1602-3 and 2-1602-3 and level alarm unit 1-1602-6 and 2-1602-6. This will require the level indicators and level alarm units to be rescaled from intermediate (± 25 inches) to narrow (± 5 inches) range.

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 modification will not create any new accident conditions. The modification is limited to the intermediate and narrow range torus level monitoring channels only. These channels provide torus level information during normal operating conditions.
3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced. The Technical Specifications, Section 3.7/4.7 requires that the amount of water in the torus is maintained between 112,200 and 115,655 cubic feet to effectively mitigate the consequences of a LOCA. The modification increases the reliability of the torus level monitoring system and slightly increases the margin of safety due to the narrower margin of error of the modified system.