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LWP-96-014

April 1, 1996

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 fourth quarter of 1995, 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,

ComEd

Quad-Cities Nuclear Power Station

L. W. Pearce Station Manager

LWP/dak

Enclosure

cc: H. Miller, Regional Administrator C. Miller, Senior Resident Inspector

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JEHM!

M04-2-93-007A Continuous Backfill Flow for RVWLIS

DESCRIPTION:

Partial A of this modification installed some of the hardware needed for a new backfill system for the Reactor Vessel Level Instrument System (RVLIS). The requirement to install this modification is from NRC Bulletin 93-03.

The conceptual design for the new backfill system is discussed in the Modification Approval Letter for Partial A. This system will not, however, be tied into existing systems and cannot be operated. The scope of this Safety Evaluation, therefore, only looks at the installation of these new components in terms of structural loading and seismic qualification. The consequences of operating the system on instrumentation, thermal effects on existing structures, and failure modes for SR equipment have not been evaluated at this time.

SAFETY EVALUATION SUMMARY:

- 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 Line Break

UFSAR Section 15.6.2

For this accident, 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.

M04-2-93-007A CONTD

- The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because a common mode failure of all instrumentation on a single or multiple reference legs is not an analyzed accident. Prior to tie-in of the new backfill system, such a hypothetical failure would have to be ruled out. Partial A, however, does not tie-in the new system and cannot adversely affect any instrumentation.
- 3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

E04-2-93-120 Installation of Anti-Cavitation Trim for Core Spray Valves M02-1402-4A(B)

DESCRIPTION:

This exempt change installed cavitation control trim in the Core Spray test valves M02-1402-4A(B) to eliminate cavitation and damage occurring at the orifices and thus, reduce system vibration. The new valve trims are designed to handle the entire pressure drop required to test the pumps and therefore, the downstream orifices were being removed. The new valve/actuator required a gearing change to maintain the stroke of the valve at approximately 4 inches per minute. The previous valve had a stem speed of 3.9 inches per minute resulting in a stroke time of 46 seconds. The new valve had the actuators overall gear ratio changed from 124.1 to 103.7. Therefore, the new valves will stroke at 4.1 inches per minute. The new valves stroke length is 4.25 inches resulting in a new full stroke time of 62 seconds.

SAFETY EVALUATION SUMMARY:

- 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 Accidents Resulting from Piping Breaks Inside Containment UFSAR Section 15.6.5

For this accident, 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.

E04-2-93-120 CONTD

- The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because no new failure modes or system interfaces are created. These changes will not modify the function of the valves, nor will they affect any interactions with other safety related components or systems. Therefore, these changes will not create a new accident scenario or malfunction not already 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.

M04-2-94-007A Shroud Head/Separator Support Leg Modification

DESCRIPTION:

This partial modification trimmed away the lower portion of two lifting lugs which connect to the Shroud Head and Separator assembly. In trimming the lugs, a portion of one of two attachment welds were reduced in size. The trimming also resulted in the complete removal of the lower weld between the lifting rod and the lug. Additional welding was performed to ensure that each modified lifting lug assembly has an equivalent load carrying capacity to the existing configuration design bases (i.e. each lug assembly was originally designed to carry at least 1/2 of total separator The lifting lugs have no impact on the functionality of the Moisture Separators when it is installed in the vessel, but are utilized as support points when the Separator is moved into the equipment pool for storage. Temporary supports were used to perform this modification. The temporary supports will completely support the weight of the assembly. Permanent supports will be designed and installed later under a separate design change.

SAFETY EVALUATION SUMMARY:

- 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

M04-2-94-007A CONTD

The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the shroud head closes off the core outlet so all of the steam-water mixture is forced through the steam separator. The standpipes and steam separators are welded to the shroud head forming an assembly which rests on the core shroud. This assembly is held in place by bolts which extend from the flange to above the separator.

Correct orientation is critical since carryunder can increase the enthalpy of the water enough to cause cavitation of the recirculation pumps. Guide pins permit accurate placement of the shroud head and separator during reassembly. The ability for the guide pins to correctly orient the shroud head is unhampered.

The evaluation demonstrates that the modified lifting lugs have adequate capacity to support the separator during lifting and moving operations. However, the results show that additional welding is required to ensure the modified assembly has an equivalent load carrying capacity to the existing configuration design bases. The lifting rod bracket attachment welds at these two locations have been reevaluated and are below ASME Section III limits. Temporary aluminum block stands will be used to provide stable support of the Separator and also to protect the pool liner during the current refueling period.

There are no adverse impacts to systems or function so as to create the possibility of an accident or malfunction different than 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.

SetPoint Changes 95-047E, 95-043E, 95-042E, 95-044E, 95-045E, 95-046E, 95-034E

DESCRIPTION:

The settings for the RMS-9 devices on the main feed breakers for MCCs 28-1A, 28-1B, 28-2, 28-3, 29-1, 29-2 and 29-3 was changed. The long time delay values were increased to prevent inadvertent tripping of the breaker during a maximum loading condition. The short time delay settings were also adjusted to compensate for the new long time delay settings.

SAFETY EVALUATION SUMMARY:

- 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 Accident (LOCA)

SAR SECTION 15.6

For this accident, 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 SAR.

- The possibility for an accident or malfunction of a different type than any previously evaluated in the SAR is not created because the operation of the breakers have not changed. There are no new failure modes introduced or new system interactions. Thus a possible accident not evaluated in the SAR is not created.
- The margin of safety, is not defined in the basis for any 3. Technical Specification, therefore, the safety margin is not reduced.

Setpoint Changes 95-038E, 95-039E, 95-040E, 95-041E, 95-034E, 95-036E, 95-037

DESCRIPTION:

The settings for the RMS-9 devices on the main feed breakers for MCCs 18-1A, 18-1B, 18-2, 18-3, 19-1, 19-2 and 19-3 were changed. The long time delay values were increased to prevent inadvertent tripping of the breaker during a maximum loading condition. The short time delay settings were also adjusted to compensate for the new long time delay settings.

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 Accident (LOCA)

SAR SECTION 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 SAR.

- 2. The possibility for an accident or malfunction of a different type than any previously evaluated in the SAR is not created because the operation of the breakers have not changed. There are no new failure modes introduced or new system interactions. Thus a possible accident not evaluated in the SAR 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-95-069 QCOS 300-15 CRD Charging Water Check Valve and Scram Inlet Valve Integrity Verification

DESCRIPTION:

Added steps to allow for differentiation between the cause of the accumulator alarm received during the performance of the procedure. The change will help determine if the cause is scram valve or check valve leakage. Also, added steps to flush check valve to stop leakage.

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:

- 2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because all of the control rods are inserted for the performance of this test. The possible drainage paths are from the CRD system to the 1(2)-0305-107 valve tube to the RBEDT. Should this occur for longer than the required time to perform the test, due to 1(2)-0305-113 and 1(2)-0305-107 valves failing open, the pumps can be tripped and the 1(2)-0301-25 valve can be closed. The other possible drain path is from the vessel to the scram valve to the 1(2)-0305-107. This can only occur if the scram inlet valve (1(2)-0305-126) and 1(2)-0305-107 fail open. Prior to opening the 1(2)-0305-107 valve, the scram valve integrity is checked. If a scram valve leaks by the 1(2)-0305-107 does not get opened.
- 3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

None

E04-2-93-216 Modify Core Spray Testable Check Valves 2-1402-9A(9B)

DESCRIPTION:

2-1402-9A

This design modified the Core Spray Testable Check Valve to a manual check valve. The pneumatic actuator limit switches, local push-buttons and associated wiring was removed. The valve body had a conversion kit installed that changed the valve to a swing check valve only. The internal wiring to Core Spray panel 902-32 was removed and relay 1430-119A spared. Circuit breaker #10 and instrument panel 902-50 was spared. The check valve push-buttons, disk position indicating and actuator position lights and associated internal wiring at Control Room panel 902-3 were removed. The actuating shaft packing gland leak-off line, 2-1425A-3/4", was disconnected and capped at the Drywell Equipment Drain header, 2-2029-12". The associated packing gland leak-off temperature element, TE 2-1465-A, and flow glass, FG 2-1402-47A, were removed. The 1/2" instrument air supply was isolated with a threaded plug at valve 2-4799-951A; and the existing instrument air regulator, tubing and in-line lubricator were removed and discarded.

2-1402-9B

The remaining portion of the gland leak-off piping for the Core Spray B loop check valve, 2-1402-9B, was removed down to the Drywell Equipment Drain header, 2-2029-12". The associated packing gland leak-off temperature element, TE 2-1465-B, flow glass, FG 2-1402-47B, and drain line 2-1425B-3/4" were removed and discarded. These two instruments and drain line have already been abandoned in-place per ECN 04-01016M.

SAFETY EVALUATION SUMMARY:

- 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

E04-2-93-216 CONTD

For this accident, 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 SAR.

- The possibility for an accident or malfunction of a 2. different type than any previously evaluated in the SAR is not created because the valve actuator was intended to provide remote testing capability and position indication. The removal of the testable portion of the check valve will only eliminate the remote position indication capability. Valve operability will be verified per approved station procedures. System hydraulic effects, such as flow and or pressure drop through the check valve will not be affected. There are no new system interfaces and no safety feature or design basis will be compromised. Removal of the actuator does not prevent the valve from maintaining the reactor coolant pressure boundary, opening to allow core spray flow during ECCS operation or closing to isolate primary containment. There are no new accidents or failure modes created by this design.
- 3. The margin of safety, is not defined in the basis for any Technical Specification, therefore, the safety margin is not reduced.

E04-2-93-324 Replace Motor, Gearing, Stem, and Cable on MOV's 2-1402-25A(B)

DESCRIPTION:

Valves MO2-1402-25A(B) are the inboard injection valves for the Core Spray System. These motor operated valves normally isolate the Core Spray System from the reactor vessel. The valve is automatically opened when the Core Spray System is initiated and reactor pressure becomes less than 325 psig. The valve can be throttled to control system flow below 4500 gpm.

The MO2-1402-25A(B) valves are interlocked in the closed position when reactor pressure is greater than 325 psig. Additionally, the valves are interlocked with their associated outboard injection valves [MO2-1402-24A(B)] to prevent opening both injection valves simultaneously at high reactor pressures.

SAFETY EVALUATION SUMMARY:

- 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 Accidents Resulting from Piping Breaks Inside Containment

UFSAR SECTION 15.6.5

For this accident, 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.

E04-2-93-324 CONTD

- The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because no new failure modes or system interfaces are created. These changes will not modify the function of the valves, no will they affect any interactions with other safety related components or systems. Therefore these changes will not create a new accident scenario or malfunction not already 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.