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PCA-95-019

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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, 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

Paul C. Aitken
System Engineering Supervisor

PCA/dak

Enclosure

cc: J. Martin, Regional Administrator
C. Miller, Senior Resident Inspector

SAFETY\NRC.LTR

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DESCRIPTION:

This change provided new and revised P&IDs for the Main Turbine Lube Oil Piping System based on the "as-built" configuration as determined by system walkdown. The piping configuration changes are for the Main Turbine Oil Reservoir (MTOR) and associated components, the MTOR Console Instrumentation, turbine bearing lubrication, the lift pump enclosure's equipment and configuration and the hydrogen seal oil/turbine shaft sealing subsystem. The P&IDs affected by this DCR are: M-2021 and M-48 Sheets 1 through 9. General Arrangement drawings M-3, M-4, M-5 and M-10 are also affected.

Note that the new and revised P&IDs for the Recirculation Pump Motor-Generator (MG) Set Oil Piping System were addressed by DCR 4-93-204 and that High Pressure Coolant Injection (HPCI) oil transfer pump removal was addressed via DCRs 4-91-168 and 4-92-248.

The following changes are purely editorial due to being traceable to an original design document.

- Revised Unit 2 Turbine exhaust hood order on General Arrangement drawing.
- Reviewed turbine lube oil, turbine bearing lift pump, turbine shaft sealing, turbine oil storage, transfer and reservoir piping configuration.
- Provided piping details for turbine centrifuge and vapor extractor.
- Provided piping/valve configuration details for: level indicators and flow indicating controllers for the clean and dirty oil tanks, pressure indicators for the turbine oil filters and filter pumps, turbine oil reservoir level transmitters, temperature indicators, and console instrumentation, and turbine lube oil.

The following changes are not traceable to a unique design document but meet the original design intent. These changes are primarily due to presentation of original design information not previously shown on the P&ID, rather than documentation of unanalyzed changes to the Main Turbine Lube Oil System:

- Revised EPN from system code 5600 to 5100 for: bearing oil lift pumps, hydrogen seal oil units, turbine oil tanks, coolers, vapor extractors, filters, and filter pumps.
- Piping configuration and line number changes on the abandoned HPCI turbine oil transfer piping.
- Presentation of drain valves on capped lines as being normally closed.

- Designation of valves to be administratively controlled in the closed position with S-locks.
- Addition of capped vent and drain lines with normally closed valves for component maintenance/testing.
- Addition of normally open root valves and reducers associated with pressure sensing components.
- Use of 1" valve (1/2-5199-174) on a non-seismic 3/4" line.
- Substitution of globe valves in place of gate valves for various vents, drains and oil transfer lines and a gate valve in place of a globe valve for the MG set oil transfer crosstie line.
- Presentation of valve 1/2-5199-53 as normally open in a dead headed process line.
- Revised valve line-up configuration to designate the 1-5121B filter instead of the 1-5121A filter as the normally used filter for the bearing oil supply.
- Addition of normally closed valve 1(2)-5199-246 between the hydrogen seal cooler level switch and the oil separator drain in lieu of a pipe plug. This valve permits proper operation of the liquid detector while allowing ease of maintenance by providing a controllable drainage path.

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:

Anticipated Operational Occurrences	UFSAR Section 15.0.2.1
Turbine Trip Without Bypass	UFSAR Section 15.2.3.1
Turbine Trip With Bypass	UFSAR Section 15.2.3.2
Turbine-Generator Trip/Load Rejection	UFSAR Section 15.8.4

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 consequence of a failure of the system is to trip the turbine and, consequently, the reactor, which has been evaluated. This change is a documentation enhancement which depicts the system in more detail. It does not affect the turbine oil system original design functions, or the consequences of malfunction of this equipment.

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

DCR 4-94-160

DESCRIPTION:

This DCR revised P&ID M-78 to remove the "L.C." (locked closed) designation for Unit 2 Core Spray Valve 2-1402-32B. This change matches the existing plant conditions for valve 2-1402-32B.

This DCR revised schematic diagram 4E-1508B Sht. 2 to show the correct terminal point designation at 250 VDC Motor Control Center (MCC) 1B, Compartment T02 for Residual Heat Removal (RHR) Discharge to Radwaste Valve MO 1-1001-21. This change matches the existing plant conditions and associated wiring diagrams for valve MO 1-1001-21.

This DCR revised key diagram 4E-2317 to show the correct breaker rating ("40A") for the Unit 2 High Pressure Coolant Injection (HPCI) Turbine Emergency Bearing Oil Pump. This change will match the existing plant conditions and associated wiring diagrams for this breaker located at 250 VDC MCC 2A, Compartment C01.

This DCR revises wiring diagrams 4E-1822 and 4E-2822 to correct equipment piece numbers (EPNs) for the Sample Pump and Bypass Pump associated with the Unit 1 and 2 Primary Containment Oxygen Analyzer System. This change will match the existing plant conditions and the associated P&IDs.

This DCR revises wiring diagram 4E-1629 and wiring tabulation 4E-1878 to show existing connections for the Turbine Electro-Hydraulic Control (EHC) System pressure switches. This change matches the existing plant conditions for the Unit 1 Turbine EHC 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:

Decrease in Heat Removal By The Reactor Coolant System	UFSAR Section 15.2
Increase in Reactor Coolant Inventory	UFSAR Section 15.5
Decrease in Reactor Coolant Inventory	UFSAR Section 15.6
Sequence of Events and Systems Operation	UFSAR Section 15.6.5.2
Anticipated Transients Without Scram	UFSAR Section 15.8

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 revising P&ID M-78 to remove the "L.C." (locked closed) designation for Unit 2 Core Spray valve 2-1402-32B, revising schematic diagram 4E-1508B Sht. 2 to show the correct terminal point designation associated with RHR Discharge to Radwaste valve MO 1-1001-21, revising key diagram 4E-2317 to show the correct breaker rating associated with the Unit 2 HPCI Turbine Emergency Bearing Oil Pump, revising the EPNs for Sample Pumps 1(2)-8741-8 and Bypass Pumps 1(2)-8741-9 associated with the Unit 1 and 2 Primary Containment Oxygen Analyzer and revising wiring drawings 4E-1629 and 4E-1878 to show the correct wiring connections associated with the Unit 1 Turbine EHC System will provide better assistance to operations and maintenance, help clarify the design and will not add any new accident scenarios.

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

SE-95-01
Alternate Limits Position use for Control Rods

DESCRIPTION:

Added a step to QCTS 930-1 and QCTP 930-4 procedures to allow substitute rod positions to be used with BPWS. GE evaluation MDE-42-0386 allows the following:

1. Up to 3 one notch changes (On 3 different rods) from BPWS-specified bank positions.

2. Position 02 substituted for position 00.

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:

   Rod Drop Accident UFSAR SECTION 15.4.10

   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 CRD System is not changed in any way by adding the results of the GE evaluation to the rod sequence procedures. In addition, no other systems are to be changed. The only changes to be made are the allowances of 3 one-notch errors on 3 separate rods, and to substitute 02 for 00 of the normal BPWS bank positions. GE has analyzed the rod drop accident with these exceptions to BPWS and has concluded that the peak enthalpy deposited from a rod drop accident will be less the 280 cal/g (current analysis limit).

Because the CRD system operation is not changed, there is no new accident created. The exceptions (stated in step 1) to BPWS have been evaluated by GE in MDE-42-0386 and have been found to be within the licensing limit of 280 cal/g.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because statistical analysis of the results of past CRDA analysis for plants using BPWS was performed by General Electric (Reference 6). Most of the relevant rod worths were under 1% ∆k and all, including a statistically determined 95/95 probability/confidence level were well under 1.5% ∆k. All rod worths used resulted in peak enthalpies well under the 280 cal/gm licensing limit using the General Electric (NRC approved) calculation method. On the basis of the data gathered and the analyses performed in the statistical study, the highest peak fuel enthalpy calculated for past CRDA analyses was 158 cal/gm.

For the postulated CRDA with three one notch insert/withdraw errors on three different rods the highest incremental rod worth was bounded between 0.94% ∆k and 0.95%∆k. This rod worth is below 1% ∆k and, therefore, will result in a peak enthalpy well under the 280 cal/gm design limit.

The BPWS analysis assumes that the core will not be critical until after the first control rod of the second group to be withdrawn is pulled. When notch position 02 is substituted for notch position 00 criticality is reached before the first rod of the second group to be withdrawn has been completely pull. However, the highest incremental rod worth beyond criticality was 0.1% ∆k which is of no consequence with respect to the CRDA. Further, for the postulated CRDA where notch position 02 is substituted for notch position 00 with 3 one notch withdraw errors on three different rods, the highest rod worth was 0.95% ∆k. This rod worth is below 1% ∆k and, therefore will result in a peak enthalpy well under the 280 cal/gm licensing limit.

To reasonably bound all fuel cycles for CECo plants using General Electric BWR fuel the results from the notch error cases were compared to the generic BPWS results (Reference 6). Based on this statistical analysis for BPWS plants the statistically determined 95/95 probability/confidence level for hot standby condition was 1.11% ∆k. This 95/95 rod worth, however, does not include increases in rod worth caused by notch errors. To approximate the increase in rod worth caused by notch errors and notch substitution the largest incremental increase in rod worth caused by these errors for both full in to full out rod drops and for rods dropped to intermediate axial notch positions were added to the 95/95 rod worth.

The greatest incremental increase in rod worth for a rod dropped full in to full out with notch errors and notch substitution was shown to be 0.02% ∆k which when added to the 95/95 rod worth gives 1.13% ∆k.

The greatest incremental increase in rod worth for a rod dropped to an intermediate notch position with notch errors and notch substitution was shown to be 0.33% ∆k which when added to the 95/95 rod worth gives 1.44% ∆k.

The conservative rod drop accident results presented in Reference 2, which were based on bounding accident shape functions, scram shape functions, and Doppler coefficients, indicate that for a rod dropped full in to full out a 1.42% ∆k rod worth will result in a peak enthalpy of 280 cal/gm. For a rod dropped from full in to full out the bounding notch error rod worth was 1.13% ∆k. From the same conservative rod drop accident result presented in Reference 2, 1 rod worth of 1.13% ∆k will result in a peak fuel enthalpy of 212 cal/gm.

Similarly, for a rod dropped to an intermediate notch position the bounding notch error rod worth was 1.44% ∆k which will result in a peak fuel enthalpy of 284 cal/gm. However, the conservative analysis presented in Reference 2 does not take credit for the improved scram shape function which is obtained when a rod is dropped to an intermediate notch position with BPWS. The scram shape functions that were previously generated (References 1, 2, and 3) were with initial control rod configurations that positioned the control rod either fully inserted or fully withdrawn. However, in Reference 4 it is shown that when a group of control rods is at an axial bank position (i.e. notch 08) the scram reactivity shape is changed. More negative scram reactivity is added to the core in the early part of the scram stroke which is due to the group of control rods being deeply positioned in the core. The increased negative reactivity insertion in the early portion of the scram stroke helps to reduce the peak enthalpy of the fuel. It was shown in Reference 4 that when a control rod group is banked at notch position 08 the resultant peak fuel enthalpy was 25% lower than when all of the control rods are either fully inserted or fully withdrawn. When credit is taken for the improved scram function the peak fuel enthalpy corresponding to the 1.44% ∆k rod becomes 213 cal/gm which is well below the 280 cal/gm licensing limit.

In addition, CRDA analysis performed by Brookhaven National Laboratory (BNL) (Reference 6) for the NRC, using appropriate thermal-hydraulic feedback, confirmed that the General Electric calculation procedure is very conservative when the initial thermal-hydraulic state is at or near saturation. The BNL calculations of the CRDA using appropriate thermal-hydraulic feedback and conservative assumptions on the initial thermal hydraulic state resulted in peak enthalpies well under 150 cal/gm for a 1.5% Δk rod and well under 200 cal/gm for a 2.0% Δk rod. In comparison, using General Electric's adiabatic model which is based on bounding scram shape functions, accident shape functions, and Doppler coefficients, yields a peak fuel enthalpy of 280 cal/gm for a 1.42% Δk rod.

It is concluded that the consequences of a CRDA with three insert/withdraw errors of one notch on three different rods are below the 280 cal/gm licensing limit. Furthermore, the consequences of a CRDA when notch position 02 substitutes notch position 00 in the BPWS criteria and 3 insert/withdraw notch errors are allowed (notch errors are not allowed on notch substitution rods) are also below the 280 cal/gm licensing limit. However, when notch substitution is allowed it is possible that criticality will be reached while the first rod of the second group withdrawn is being pulled completely out.

M04-2-92-020

Permanent Repair to the Reactor Vessel Shroud Access Hole Cover

DESCRIPTION:

This modification involved repairing the cracked AHCs. There are two types of cracks this repair eliminated. Circumferential cracks when developed along the weld affected area and radial cracks which could propagate to the vessel or shroud wall. The original plates and the weld affected area was Electric Discharged Machined out. The new cover plates were designed in accordance with ASME Section III, Subsection NG.

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	UFSAR SECTION	14.2
	FSAR SECTION	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 this repair will not create an accident or malfunction different than evaluated in the SAR. ASME Section III Subsection NG was used to assure reliability and adequate margins of safety in the design. The materials of construction are compatible with the vessel internals for a 40 year life. There has been no new malfunctions that have been associated with this repair. UFSAR SECTION 6.3.3.1.2.2. will be revised to reflect the designed leakage rate of 78 gpm. This will be added to the original 807 gpm total due to the jet pump slip joints and bolted joints.

The new total is 885 gpm. The LPCI system capacity was sized to accommodate 3000 gpm leakage at these locations. Therefore, this does not create the possibility of an accident or malfunction different than previously evaluated in the FSAR.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the current MCPR Safety Limit will remain valid and the basis for the Technical Specifications will not be affected as long as no more than one double tap per recirculation loop and two single tap jet pump flow instrumentation are out of service.

   This repair will not effect any accident or transient safety analysis which forms the basis for the Technical Specifications. The only limit potentially impacted is the MCPR safety limit. The MCPR safety limit considers the effect of core flow uncertainty. The amount of bypass flow is negligible during steady state conditions. The total core flow uncertainty therefore remains below the value used to generate the safety limits. See The General Electric Safety Evaluation for Quad Cities Unit Two AHC repair. Therefore, the current MCPR safety limit is valid and the basis for the Technical Specifications will not be effected provided no more than one double tap per recirculation loop and two single tap jet pump flow instrumentation are out of service.

E04-2-93-286

2A-3904, RBCCW TCV Replacement with Anti Cavitation Trim

DESCRIPTION:

RBCCW TCV 2-3904A and existing operator was replaced with a 12" Copes Vulcan, Class 125, Series D-600 valve with hush style anti-cavitation trim, and a Model D-600-16-50 actuator. The 18" to 12" reducers on each side of the valve was replaced with reducers coated with Belzona. A new pipe support was added to the 3" Instrument Air supply header. One hanger on the 18" to 12" reducer was modified to accommodate the increased load of the replacement valve.

The new valve with anti-cavitation trim allows for multi-stage pressure reductions across the valve which minimizes the occurrence of cavitation. The existing TCV was replaced due to cavitation induced erosion and vibration.

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 replacement of the RBCCW TCV is a like for like replacement in physical configuration and function. The new valve weighs 500 lbs more than the old valve. The piping due to the increase in valve weight has been evaluated per original design requirements, Power Piping Code B31.1 1967 edition. See Bechtel Calculation QC-429-P-054, Rev. 1. The support on the 18" to 12" reducer

will be modified to accommodate the increase in load. The existing pipe stanchion supporting the 3904B valve has been shown to be acceptable.

The Cv of the new valve (880) is lower than the old valve (1460). However, the lower Cv of the new valve is still greater than the required Cv of the system (564) See Bechtel Calculation QC-429-M-010, Rev. 0. The flow characteristics of the new valve are adequate and will throttle properly. All original design basis requirements are met for the valve replacement.

This is a non-safety related system whose failure will not create a accident of a different type that would adversely affect the health and safety of the public. It has been demonstrated that replacement of the TCV 3904A valve meets the original design requirements.

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

Exempt Change E04-1-93-334
1D Condensate Pump

DESCRIPTION:

The scope of work for Exempt Change E04-1-93-334 was to install seven different design changes to the 1D Condensate Pump and the Condensate Booster Pump (1-3302D and 1-3401D respectively). These changes are listed as:

1. Reduction in the gap between the pump casing cut-water and the pump impeller. This modification helped reduce the pump vibration seen at vane-passing frequency on the Condensate Pump and the Condensate Booster Pump.

2. Changed out of the inboard and the outboard bearings with that of a different type. This work was completed on both the Condensate and Condensate Booster Pump to increase the life of these bearings, thus enhancing pump reliability.

3. Relocation of the inboard bearing thermocouples (two in all) on both the Condensate and Condensate Booster Pump. This scope of work was required to accommodate the new style bearing so that temperature is properly monitored.

4. Drilling of a new internal passage for the inboard and outboard bearings oil sump. This was completed to both the Condensate Pump and Condensate Booster pump. The new internal passage improved oil flow through the bearings and allow complete drainage of all oil in the bearing housing.

5. Installation of oversize pump casing wear rings and an O-Ring between the pump casing and casing ring nut on both the Condensate Pump and Condensate Booster Pump. These wear rings help minimize any pump casing erosion.

6. Chamfering of the pump shaft sleeve on the inboard and outboard side of the Condensate Pump ONLY, to accept the installation of a new O-Ring. This O-ring is to stop leakage that is seen along the pump shaft.

7. Installation of a check valve on the seal cooling line on the Condensate Pump ONLY. This check valve was original design on the pump and must be installed to return pump to its original configuration.

The pump manufacture, Ingersoll-Dresser reviewed and approves all work that was performed under the direction of this Exempt Change (E04-1-93-334) which is being reviewed. The design changes listed above improved the reliability of both the condensate and condensate Booster Pump. The work completed was classified as non-Safety Related. There are No Unreviewed Safety Questions associated with this Exempt Change. Nor are any revisions required to the UFSAR or the Technical Specifications as a result of this work.

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 Exempt Change provides for several design changes to the Condensate/Condensate Booster Pump. The worst possible event this work could cause is a sudden failure on the Condensate/Condensate Booster pump, with a remote chance that this would trip the Reactor Feedwater Pumps. Although this is considered an incredible event, the UFSAR has analyzed the transient of the loss of all three Reactor Feedwater Pumps and found it acceptable to loose all three simultaneously. Since the Condensate pump and the Condensate Booster Pump are insignificant to plant safety, no Accident Analysis was required to be performed on their malfunction. Therefore, it can be stated that there is NO other malfunction of accident of a different type which could occur as a result of this Exempt Change.

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

E04-1-94-208
EDG HVAC Supply Fan Control Circuit Modification

DESCRIPTION:

A fire in the TB-II area could cause failure of the AR1 relay located in panel 2212-47 and associated conductors and disable the U1 EDG HVAC. Consequently, the Unit 1 EDG would be disabled by a loss of HVAC.

The addition of a bypass switch at the U1 EDG remote start panel to bypass and isolate the AR1 relay in the HVAC supply fan control circuit in the event of a TB-II area fire corrects this situation and satisfy the requirements of the Quad Cities Appendix R program.

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 Offsite AC Power SAR SECTION 15.2.6

   For each of these accidents, it has been determined that change described above will not increase the probabilit an occurrence or the consequence of the accident, or malfunction of equipment important to safety as previou 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 addition of the bypass switch to the U1 EDG HVAC logic does not create a new failure mode. As described previously, it increases reliability of the U1 EDG HVAC. Therefore, an accident or malfunction of a type different from those previously evaluated 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-95-002
ADRR 95-002, SESR 4-2358

DESCRIPTION:

Installed temporary lead shielding on the ERV/Targetrock "T-Quenchers" in the Unit 2 Pressure Suppression Chamber (Torus). Loading of the "T-Quenchers" is not to exceed 160 lbs/ft on the pipe. All lead shielding was installed after the torus was drained and removed prior to filling the torus.

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 Site Engineering has evaluated the ERV/Targetrock "T-Quenchers," and has determined that the allowable additional lead shielding load is 160lb/ft. This application is restricted to the time that Primary Containment is not required and the torus is drained. Under these conditions, the torus would not be required to mitigate the consequences of an accident. In the unlikely event of a failure as a result of the lead shielding installation, this failure would be contained within the torus. Safety-related equipment outside the torus would not be affected by this failure. Therefore, the lead shielding installation does not adversely impact systems or functions that would create the possibility of an accident or malfunction of a type different from those 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-95-003

Setpoint Change No's 95-001E, 95-002E, and 95-003E

DESCRIPTION:

Installed new overload heaters in MCC 18-4, cubicles 1C, 2B, and 2D. These cubicles correspond to the B Control Room HVAC 1/2A and 1/2B booster fans and the Air Handling Unit fan motors, respectively. The new overload heaters are models FH42 and FH85 from Westinghouse and replaced models FH41 and FH83. Once overloads were replaced, the relay dial setting was placed at 100 percent.

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 UFSAR 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 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 overload heaters for the booster fans and the air handling unit fan motors for the B Control Room HVAC system cannot create an accident or malfunction that is different from those already evaluated. A failure of a booster fan is already assumed and so 2 fans were installed. Additionally, the A Control Room HVAC system is assumed to operate with the B Control Room HVAC acting as the redundant backup to it. The new overloads will not affect normal operation and will protect the fans from unplanned trips or failures during a degraded voltage condition. No other components are affected by the replacement. Therefore, no new interactions or functions are created that could cause a malfunction or accident different from those already evaluated.

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

SE-95-004
HPCI Room Cooler Thermostat Setpoint Change

DESCRIPTION:

Changed the thermostat setpoint to the HPCI Room Cooler to 100°F.

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 UFSAR 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 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 to 100°F on the HPCI Room Cooler thermostat will ensure that HPCI Room is maintained at the EQ normal temperature of 120°F and during an accident scenario when the HPCI System is running the room temperature will be maintained at EQ emergency temperature of 150°F. This change will not impact the operation of the HPCI system or any other system. This change will not create the possibility of a new accident.

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

SE-95-006
3ESR 4-2199; DCR 4-95-007

DESCRIPTION:

Changed the safety classification of the Steam Jet Air Ejector (SJAE) Suction Isolation Valves, AO1(2)-5401A/B and 1(2)-5402A/B , and the Offgas to Chimney Isolation Valve, AO 1(2)-5406 from safety related to non-safety related. The document change involved deleting safety flags and references as they appear in:

UFSAR - Section 10.4.2.1 Design Bases - Main Condenser Evacuation System.
P&ID's - M-42 Sheet 1 & M-84 Sheet 1
Master Equipment List, Tab 5400

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:

   Control Rod Drop Accident (CRDA) UFSAR SECTION 15.4.10

   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 this change does not cause a functional change in the offgas system or its interaction with other systems. Reclassification of these valves does not alter any physical parameters or process variables of the plant. There are no new failure modes introduced to the offgas system, because there are no new components added to the system.

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

SE-95-007
Temp Alt for Unit 2 Reactor Building Sample Panel

DESCRIPTION:

Routed sample water from the outlet of the Conductivity Cell for the Reactor Water Clean-Up Inlet Sample Point to the inlet side of the Conductivity Cell for the Reactor Water Recirc Sample Point to provide the Control Room with better monitoring of Reactor Water Quality.

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:

   Break in Reactor Coolant Pressure
   Boundary Instrument Line
   Outside Containment UFSAR SECTION 15.6.2

   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 tubing used for the Temp-Alt shall be rated for $\geq$ 100 psig; which is greater than the rating for the existing conductivity cell module. The sample water is routed through a pressure reducing valve prior to going to the conductivity cell and subsequently through the tubing installed by this Temp Alt. The pressure reducing valve will maintain a pressure of approximately 20-40 psig, which is well below the pressure rating of the tubing installed by this Temp Alt.

The pressure at the inlet to the Conductivity Cell for the Reactor Water Recirc Sample Point is expected to be zero psig; due to valves 2-220-44 and 2-220-45 being closed. A pressure reducing valve upstream of the conductivity cell would maintain pressure < 40 psig even if valve leak-by occurs for valves 2-220-44 and 2-220-45.

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