Commonwealth Edison Company
Quad Cities Generating Station
22710 206th Avenue North
Cordova, IL 61242-9740
Tel 309-654-2241

ComEd

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SVP-00-006

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Quad Cities Nuclear Power Station, Units 1 and 2
Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

Subject: Summary Report of Changes, Tests, and Experiments Completed

In accordance with 10 CFR 50.59 and 10 CFR 50.71(e), we are forwarding Quad Cities Nuclear Power Station's Quarterly Summary Safety Evaluation Report. These safety evaluations cover the period of November 1, 1999 through January 31, 2000.

Should you have any questions concerning this letter, please contact Mr. C. C. Peterson at (309) 654-2241, extension 3609.

Respectfully,

Joel P. Dimmette, Jr.
Site Vice President
Quad Cities Nuclear Power Station

Attachment:
Summary Report of Changes, Tests, and Experiments Completed

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station

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ATTACHMENT A

SUMMARY REPORT OF CHANGES, TESTS, AND EXPERIMENTS COMPLETED

NOVEMBER 1, 1999 to JANUARY 31, 2000

SVP-00-006

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Tracking No. SE-97-110
Activity No. DCP 9600187

DESCRIPTION:

Remove the Unit 2 ACAD Preaction Fire Protection System from service. This will be accomplished by electrically de-energizing the system at the 120 VAC feed; lifting specific conductors at the multiplexer which will result in disabling the output signal for system actuation; disassembling the deluge valves and removing the valve internals. The associated area smoke detectors will remain in place for alarm purposes only. Also, to preclude the inadvertent operation of the ACAD Compressor the power cable will be determined at the MCC. This particular circuit is now out of service. Upon completion of this modification fire protection panel 2-2252-63 will be used as a junction box. The deluge/isolation valves will remain in place and have the capability of being operated manually.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the combustible that dictates the presence of the ACAD Preaction Fire Protection Protection System has been removed and the probability of a fire occurring has been decreased. The ACAD Preaction Fire Protection system is no longer required, hence the removal from service of this equipment will not increase the probability of a fire.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because this exempt design change does not introduce any potential equipment failures, nor does it impact any existing analyzed failure modes or introduce any potential for new failures in any mode of plant operation. This is because the ACAD air compressor has been abandoned and no longer serves any role in the operation of the plant.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because since the oil has been removed from the compressor, the probability of a fire has been decreased. Without the fuel for a fire the proposed fire becomes non-existent. There are no changes to any parameters upon which Technical Specifications are based; therefore, there is no reduction in the margin of safety.

Tracking No. SE-99-036
Activity No. DCP 9900038

DESCRIPTION:

This change replaces the Electronic Speed Switch with Mechanical Speed Switch for the 1/2 A Diesel Driven Fire Pump. It removes the electronic tachometer, speed switch and associated hardware/wiring and installs a mechanical tachometer, speed switch and associated hardware/wiring. The speed switch protection is required to prevent the engine from 'running away' if the pump shaft or similar component were suddenly to break (i.e., suddenly a no load situation). The engine is designed by Cummins to operate with either speed control device. This change will not effect how the engine is operated or performs. Therefore, this change will be transparent to the operation of the engine.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because these changes are confined to a portion of the engine protection circuitry of the fire pumps. They do not affect the manner in which the pumps are operated or their ability to perform their design functions. These changes can have no affect on the probability of the occurrence of a fire.

   Likewise, the consequence (increase in off-site dose levels) of a fire is not changed. A severe fire is assumed to 'destroy' all fire protection equipment within the affected fire area. The Safe Shutdown (SSD)/ Fire Protection system is designed to safely shutdown the plant without credit for any SSD equipment operable from the affected fire area. This is part of the "defense in depth" concept as per section 9.5.1 of the UFSAR. There are no changes to the operation of the pumps or affect on their capacity. Therefore, there can be no increase in the consequences of the postulated accident.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because these design changes are to an engine protection feature of the Diesel-Driven Fire Pumps. There are 2 pumps, each rated for 100% of the required fire water capacity. If the speed protection trip is called upon to shut down the affected engine, then a single equipment failure has occurred and the redundant fire pump will operate to mitigate the consequences of the postulated accident. Loss of one fire pump is a previously evaluated condition. Therefore, replacement of the electronic speed switch with a mechanical speed switch cannot cause any accident or transient not previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the Fire Protection system is designed to function with a single equipment failure (loss of one diesel fire pump). Changes do not adversely affect method of operating, testing or maintaining safe-shutdown equipment or the ability to achieve and maintain safe shutdown in the event of a fire.

Tracking No. SE-99-041
Activity No. DCP 9600386; UFSAR-99-R6-002

DESCRIPTION:

The purpose of this design change is to remove clean demineralized water as a source of cooling for the Primary Containment Oxygen Analyzer Moisture Separator 1-8824, and tie in the Reactor Building Closed Cooling Water System (RBCCW) as the primary source for Unit 1. The UFSAR has been updated to reflect this change in RBCCW.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the Primary Containment Oxygen Analyzing System and the RBCCW system interface with the Primary Containment Boundary. However, these systems are isolated from containment in the event of a design basis accident or transient. The systems do not interface with the Reactor Vessel Pressure Boundary. Therefore, these systems do not impact the probability of an accident or transient nor the consequences.

   The RBCCW system is a reliable source of cooling for the Primary Containment Oxygen Sampling Analyzer. In the event RBCCW is lost, operations is procedurally directed to shut down the reactor because of the cooling required by the Recirculation Pump Seals. The RBCCW system is being routed to the Primary Containment Oxygen Analyzer in accordance with USAS B31.1-1967 Power Piping and General Work Specification R-4411. The probability of a failure of this line is no different than any line attached to the RBCCW system.

   The consequences of a RBCCW Leak or a Primary Containment Oxygen Analyzer failure are unchanged by this design change.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because there are no system interactions that could create the possibility of an accident or transient different than those previously evaluated in the SAR. The containment isolation system isolates the RBCCW system and Primary Containment Oxygen Analyzer in the event of an indicated failure.

This is not a functional change to either system. Both systems will continue to operate as designed. Therefore, this design change does not create the possibility of a malfunction of the RBCCW or Primary Containment Oxygen Sampling System.

In the event that RBCCW is lost to the Primary Containment Oxygen Sampling Analyzer, operations would direct the Chemistry Department to take air samples until the Contaminated Condensate can be tied into the system to restore operability of the oxygen analyzer.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because Technical Specification 3/4.7.J acceptance limit is <4% oxygen. The purpose of the Primary Containment Oxygen Sampling System is to monitor the oxygen levels in containment during normal operation. The Primary Containment Oxygen Sampling system does not contribute to the oxygen levels in containment. In the event of a failure of this system, the Chemistry Department has procedures in place to take the sample through alternate means.

Tracking No. SE-99-046
Activity No. QCOP 0500-07, Rev. 0, BYPASSING "A" CHANNEL OF THE REACTOR MODE SWITCH TO SHUTDOWN SCRAM

DESCRIPTION:

This is a new procedure that installs a jumper around the 0590-116A and 0590-115A contacts in the "A" Reactor Protection System (RPS) manual scram circuit. This will prevent the interruption of RPS power to manual scram subchannel trip relays 590-109A and C when the Reactor Mode Switch is moved to the SHUTDOWN position.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the jumper will be placed on terminal blocks that the mode switch is connected to. No work will be performed directly on the mode switch. The jumper will only be placed in the logic for the manual scram relays for "A" channel (0590-109 relays) and will be removed immediately after the mode switch is moved to the SHUTDOWN position. The jumper will not affect any other mode switch functions. The jumper will only be placed when all rods are at position "00" (fully inserted). The jumper will not affect the REFUEL or STARTUP functions of the mode switch or bypass the rod block function of the SHUTDOWN position.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the jumper will only be placed when all rods are at position "00" (fully inserted). The jumper will not affect the rod block

function of the SHUTDOWN position. The jumper will be removed immediately after the mode switch is moved to the SHUTDOWN position. Per UFSAR paragraph 7.2-40: "This scram is not considered a protective function because it is not required to protect the fuel or nuclear system process barrier, and it does not act to minimize the release of radioactive material from any barrier."

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because per the PREREQUISITES of the procedure to install this jumper, all 177 control rods must be fully inserted, the reactor mode select switch ready to be moved from the STARTUP position to the SHUTDOWN position and no half scrams present or half scram testing in progress. Installing this jumper will place the Unit in an ACTION statement to place the inoperable channel(s) and/or that trip system in the tripped condition within 1 hour but an inoperable channel need not to be placed in the tripped condition when this would cause the trip function to occur. In this case, the inoperable channel will be restored to operable status within 2 hours or the action required previously would apply. These limits addressed in the Technical Specifications are always maintained. Therefore, the margin of safety is not changing.

Tracking No. SE-99-054
Activity No. UFSAR-99-R6-035

DESCRIPTION:

UFSAR Table 11.3-1, "Process Instrument Alarms", incorrectly states that the Off-Gas cooler condenser has a high and low discharge temperature alarm located in the Control Room. The Off-Gas system design is such that the cooler condenser only has a high discharge temperature alarm indicated in the Control Room. The low discharge temperature alarm does not exist and is not part of the design of the Off-Gas system. A revision is being made to remove the cooler condenser discharge low temperature alarm from UFSAR Table 11.3-1.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the affected equipment is independent of and has no interface or interaction with equipment important to safety. Therefore, the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the revision to the UFSAR does not change the design functions, design configuration, design interfaces or operation of the Off-Gas system and its components. The change to the UFSAR is being made so that the UFSAR correctly reflects the design of the Off-Gas alarms located in the Control Room.

Since no changes are being made to the design of the Off-Gas system, the possibility of an accident or malfunction of a different type is not created.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the UFSAR change will not change the limits specified in Technical Specification 3/4.8.I, Main Condenser Off Gas. The limits specified are valid.

Tracking No. SE-99-081
Activity No. Offsite Dose Calculation Manual

DESCRIPTION:

Revision 1.9 to Chapter 10, Revision 2.1 to Chapter 11,and Revision 2.0 to Chapter 12 of the Quad Cities Station Offsite Dose Calculation Manual (ODCM).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the ODCM program is passive and cannot initiate any DBA event, there is no increase in the probability of an accident. The ODCM does not interface with any operating plant equipment either directly or indirectly, it only provides indications of the consequences of an accident.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the possibility of an accident or transient different than those described in the UFSAR is not created. The changes are to allowable release limits for liquid discharges, the removal of 2 outer ring TLD locations, and some editorial changes. The ODCM program is similar in all aspects to the previous program and only monitors the station effluents and the environment around the station. It has no interface with operating station systems or components.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the Technical Specification sections affected are in the administrative section of Technical Specifications. The Technical Specification section listed state that a program needs to be in place and that it shall ensure the stated limits for offsite dose are met. The ODCM program still meets the requirements of the affected Technical Specifications. No reduction in the margin of safety will occur by implementing these changes.

Tracking No. SE-99-083
Activity No. UFSAR-99-R6-026

DESCRIPTION:

This activity corrects UFSAR Section 9.3.3.1 and QOP 2040-01 Revision 7 to state that the Drywell Equipment Drain Sump (DWEDS) pump will trip if the isolation valves are closed, and clarifies Section 9.3.2.1.3.2 to state that High Radiation Sampling System (HRSS) liquid samples that are hotter than 120°F can be cooled to 120°F or less. This will close out Design Basis Initiative (DBI) Open Items 153 and 2264.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the activity is a revision to the UFSAR to correct and clarify details on the DWEDS pump logic and HRSS liquid sample cooling capabilities. No actual change is made to any SSC or its operation. No equipment is modified. All equipment will continue to function exactly as it does now.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the activity is a revision to the UFSAR to correct and clarify details on the DWEDS operation and the HRSS. No actual change is made to any SSC or its operation. No equipment is modified. All equipment will continue to function exactly as it does now.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there are no changes to any setpoint, surveillance, or bases in the Technical Specifications.

Tracking No. SE-99-084
Activity No. UFSAR-99-R6-027

DESCRIPTION:

a) The first activity is to revise Section 3.8.2.1.7 to provide a more detailed description of the Control Rod Drive (CRD) penetrations. Specifically, the revision will provide clarification that there are 362 CRD penetrations, of which 354 are currently used by the CRD system. The remaining eight are spares, or used for non-CRD applications. The effect of this change is that the UFSAR will contain a more accurate description of the CRD penetrations.

b) The second activity is to revise Table 3.8-2 as follows:
Penetration X-17 is changed from "type 2" to "type 1"

Penetration X-20 is changed from "4 inch" to "3 inch"
Penetration X-21 is changed from "type 2" to "type 4"
Penetration X-22 is changed from "type 2" to "type 1," and from "1 inch" to "1-1/4 inch"
Penetration X-36 is changed from "type 2" to "type 1"
Penetration X-47 is changed from "Standby liquid cont." to "Standby liquid control".
Add "Type 4" to the description of "Type 3" at the bottom of the table.

The effect of this change is that the UFSAR will be consistent with information provided on M-330 Rev. N.

c) The third activity is to revise Section 3.8.4 to delete the inclusion of the radwaste building as a portion of the reactor building/turbine building integral structure. The effect of this change will be that the UFSAR will have accurate information in its description of the reactor building/turbine building seismic analysis.

d) The fourth activity is to revise Table 3.8-13 to change the values of the reactor building walls allowable axial stress from 770 psi to 1690 psi. The effect of this change will be that the UFSAR will have accurate values for the reactor building walls allowable axial stress.

e) The fifth activity is to revise Section 3.4.2.3 to change the threshold elevation of the lowest opening into the radwaste building. The effect of this change will be that the UFSAR will have accurate information regarding the lowest opening into the radwaste building.

f) The sixth activity is to revise Section 3.5.3 to change the turbine building minimum wall thickness from 2 feet to 1 1/2 foot. The effect of this change will be that the UFSAR will have accurate information in its description of the turbine building minimum wall thickness.

g) The seventh activity is to revise Section 3.5.3 to change the thickness of the concrete that surrounds the primary containment from "6 feet to 6 1/2 feet," to "4 feet to 6 feet". The effect of this change will be that the UFSAR will have accurate information in its description of the concrete that surrounds the primary containment.

h) The eighth activity is to revise Section 3.8.2.1.1 and Table 6.2-1 to change the variation in thickness of the drywell spherical section from 13/16 inches - 1-1/16 inches, to 11/16 inches - 1-1/8 inches. The effect of this change will be that the UFSAR will have accurate information in its description of the drywell spherical section.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the activity is to revise the UFSAR to correct discrepancies to Chapters 3 and 6 of the UFSAR to agree with the design basis and physical plant. Since the UFSAR changes are not physical or operational there will not be an increase in the probability of occurrence, or the consequences of an accident. Additionally, there will be no increase in the probability of a malfunction of equipment important to safety.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the activity updates the UFSAR to make it consistent with design documents and does not change any SSC or procedure. Since the UFSAR changes are not physical or operational they will not create the possibility of an accident or malfunction of a different type than any evaluated previously in the safety analysis report.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there are no Technical Specifications affected by these changes; therefore, the margin of safety as defined for any Technical Specifications is not reduced.

Tracking No. SE-99-085
Activity No. UFSAR-99-R6-028

DESCRIPTION:

This UFSAR revision is to correct and clarify UFSAR Sections 9.2.2.2, 9.2.2.3, 9.2.3.2, Tables 9.2-2, 9.2-4, Figures 9.2-2 and 9.2-4, which will close out Design Basis Initiative (DBI) Open Items 1099, 1042, 1226, and 926. The total developed head for the service water pump rated flow will be corrected to match the vendor data. The type and normal operating state of several service water valves will be corrected in Figure 9.2-2. Editorial clarifications will be made to enhance the descriptions of loads supplied by the Service Water, Reactor Building Closed Cooling Water (RBCCW), and Turbine Building Closed Cooling Water (TBCCW) systems in the UFSAR sections, tables and figures identified above.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the UFSAR revision does not alter the operation of any SSC. No new components are added. No actual change is made to any SSC or procedure. No equipment is modified. The service water, TBCCW, and RBCCW systems are not initiators for any accidents or transients. Because all SSCs will continue to perform their required design function as they do now, there can be no increase in the probability of occurrence or consequences of any accident or transient.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the UFSAR revision does not alter the operation of any SSC, nor does it add any new SSCs. No actual change is made to any SSC or procedure. No existing equipment failures or malfunctions are altered and no new equipment is added. All equipment will continue to function exactly as it does now.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because these service water, RBCCW, and TBCCW systems do not have a role in the basis for any Technical Specification. There are no changes to any setpoint, surveillance, or bases in the Technical Specifications.

Tracking No. SE-99-086
Activity No. UFSAR-99-R6-029

DESCRIPTION:

UFSAR Sections: 6.2.1.3.1, 6.2.1.3.4.4 and 6.3.3.2.7; Table 6.2-7, 6.3-2, and 6.3-14 will be revised to resolve discrepancies found during the design basis initiative. The changes are related to the UFSAR descriptions of the penetration pipe sizes, Emergency Core Cooling System (ECCS) system description, Residual Heat Removal (RHR) description, Electromatic Relief Valve (ERV) description, and the primary containment building.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the UFSAR changes correct discrepancies and clarify the UFSAR description of the plant design. The changes are neither physical nor operational in nature and therefore, will not result in increasing the probability of occurrence or the consequences of an 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 evaluated previously in the safety analysis report is not created because the UFSAR changes correct discrepancies and clarify the UFSAR description of the plant design. The changes are neither physical nor operational in nature and therefore, will not result in the possibility of an accident or malfunction of a different type than any evaluated previously.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because these changes do not affect Technical Specifications. Therefore, the Technical Specification margin of safety is not reduced.

Tracking No. SE-99-088
Activity No. UFSAR-99-R6-030

DESCRIPTION:

This activity is a change to the UFSAR as follows:

Revise UFSAR Section 3.2.7 to provide a more detailed explanation of the Master Equipment List (MEL) upgrade effort. Specifically, the change describes the evolution from Generic Letter 83-28 classification of equipment to classification utilizing the "Guideline for safety classification of Systems, Components, and Parts use in Nuclear Plant Applications" (NCIG-17).

Revise the title of the equipment listings in sections 3.2.9 and 5.4.8 from "RWCU Vessels" to "RWCU Filter Demineralizer Vessels and Pumps," and, from "RWCU Vessels (Regenerative)" to "RWCU Regenerative Heat Exchangers."

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because this activity updates the UFSAR to make it consistent with design documents and does not change any SSC or procedure. Since the UFSAR changes are not physical or operational there will not be an increase in the probability of occurrence, or the consequences of an accident. Additionally, there will be no increase in the probability of a malfunction of equipment important to safety.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the activity updates the UFSAR to make it consistent with design documents and does not change any SSC or procedure. Since the UFSAR changes are not physical or operational they will not create the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there are no Technical Specifications affected by these changes; therefore, the margin of safety as defined for any Technical Specifications is not reduced.

Tracking No. SE-99-089
Activity No. UFSAR-99-R6-032

DESCRIPTION:

The safety evaluation addresses three changes to the UFSAR as follows:

a) In Section 11.5.1 the radius for environmental radiation monitoring is corrected from 17 miles to the surrounding area of the station in compliance with the Offsite Dose Calculation Manual (ODCM). The ODCM defines the environmental radiation monitoring requirements.

b) In Section 11.5.2.3 the purpose of the shielded check source (Cs-137) is corrected. The purpose of the shielded check source is for an operability check rather than for calibration as stated in this section.

c) In Section 15.7.2.5.3 the discharge rate of SBGTS is corrected from one building volume per day to a minimum of one building volume per day.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because this is a documentation change to correct the UFSAR description only. No physical or operational changes are made to any SSC, nor are any new SSCs introduced. Because all SSCs will continue to function as they have, there can be no increase in the probability of occurrence or the consequences of an accident or a malfunction of equipment previously evaluated.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because this UFSAR change is a documentation change to correct minor details in the description only. No physical or operational changes are made to any SSC, nor are any new SSCs added. Because all SSCs will continue to function exactly as they have, there is no possibility of creating a new type of accident or equipment malfunction.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no changes are made to any SSCs that affect any setpoint, surveillance, or bases in the Technical Specifications. This change corrects minor details in a UFSAR description only.

Tracking No. SE-99-090
Activity No. UFSAR-99-R6-033

DESCRIPTION:

UFSAR Table 6.3-5, Residual Heat Removal (RHR) Pump Design Parameters, will be revised to correct the performance characteristics for 2 RHR pumps running to state an NPSH (required) of 28 ft.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the UFSAR changes correct discrepancies and clarify the UFSAR description of the plant design. The changes are neither physical nor operational in nature and therefore, will not result in increasing the probability of occurrence or the consequences of an 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 evaluated previously in the safety analysis report is not created because the UFSAR changes correct discrepancies and clarify the UFSAR description of the plant design. The changes are neither physical nor operational in nature and therefore, will not result in the possibility of an accident or malfunction of a different type than any evaluated previously.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because these changes do not affect Technical Specifications. Therefore, the Technical Specification margin of safety is not reduced.

Tracking No. SE-99-091
Activity No. DCR 990263; UFSAR-99-R6-038

DESCRIPTION:

Plant drawings will be revised to show correct valve positions, Piping Design Table (PDT) designators, and valve labels on the Control Rod Drive (CRD) and Offgas systems. The UFSAR will be revised to show correct valve positions and strainer orientation in the CRD System.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not

increased because the changes more accurately depict system equipment as installed and operated. The function of components and their interaction with other SSCs is unchanged. Accident / transient precursors are unaffected. Therefore, probability and consequences remain unaffected.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the changes are confined to a more accurate depiction of the system equipment as installed and operated. System/Component operation and failure modes are unchanged. Interactions between the components represented by the change and other plant SSCs are unchanged. Nothing in the change being implemented has any credible means for creating an accident or malfunction of a type not previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the components shown in the drawings and figures being changed do not provide a basis for any margin of safety.

Tracking No. SE-99-092
Activity No. UFSAR-99-R6-039

DESCRIPTION:

UFSAR Section 2.1.2 currently states that the authority to control river traffic adjacent to the Station is vested with the U.S. Army Corps of Engineers. This is being changed. The changed statement will state that if the need to control river traffic arises, Quad Cities emergency procedures will detail the process for making the required notification to the States of Illinois and Iowa. The States will coordinate control of the river in accordance with State emergency plans.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the process of notifying State governments for controlling river traffic in an emergency does not interface with any safety-related operating plant equipment either directly or indirectly. All safety-related systems will continue to operate as currently stated in the UFSAR. This UFSAR revision does not affect operating plant systems, structures or components.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because this UFSAR revision does not introduce any of the precursors or initiators for any of the accidents or transients in the UFSAR; therefore, this UFSAR revision cannot increase the probability of occurrence for any of these accidents or transients.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the notification process for controlling river traffic in an emergency is not described in the Technical Specifications.

Tracking No. SE-99-093
Activity No. UFSAR-99-R6-041

DESCRIPTION:

Change the minimum required total flow for the Emergency Core Cooling System (ECCS) room coolers (RHR, Core Spray and HPCI room coolers) to 265 gpm from 185 gpm in Section 9.5 of the UFSAR.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because changing the room cooler design flow rate in the UFSAR does not change system operation or required minimum flow during the monthly surveillance. Therefore, there will be no increase in probability of occurrence or the consequences of any accident or transient.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because System operation is not affected, but the minimum required flow for operability is being raised. Since the system is designed for flow in excess of this new minimum, no unanalyzed accidents or transients will be created.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because Technical Specifications or margins of safety are not affected by this change. There is no Technical Specification requirement for the ECCS room cooler flow rate.

Tracking No. SE-99-096
Activity No. QCTP 0130-14 Rev. 0; QCTS 0820-01 Rev. 6; QCTS 0820-02 Rev. 5; QCTS 0820-03 Rev. 5

DESCRIPTION:

These procedure changes reflect a change in the methodology used to evaluate the acceptability of the Residual Heat Removal Service Water (RHRSW) Vault flood protection barriers. The changes are summarized as follows:

* The acceptability of the RHRSW vault flood protection barriers will be evaluated based on the total leakage measured for unisolable barriers associated with a specific internal flooding scenario.

* The acceptance criteria has been revised to permit minor leakage into the vault. Previously, the acceptance criteria was no visible leakage using a soap bubble solution to check for leaks.

* The test frequency will be changed from once per operating cycle to every other operating cycle. A visual examination of the flood barriers will be performed to check for obvious physical damage during the alternate operating cycle.

Previous experience has shown that the majority of the test "failures" have been attributed to minor air leakage and not gross failure or excessive leakage. The current acceptance criteria has caused numerous repairs, delays, and increased exposure that were not required to ensure adequate flood protection of the safety-related equipment in the RHRSW Vaults.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the procedural changes to the flood barrier test methodology, the acceptance criteria, and the test frequency do not affect piping systems or other equipment in any way that could create a failure and initiate an internal flooding event. Therefore, the probability of the occurrence of an internal flooding event described in UFSAR Section 3.4.2.1.2 is not increased.

   As described in UFSAR Section 3.4.1.2.1, an internal flood of the Condensate Pump area or an RHRSW vault will not result in an event with radiological consequences. The basis for that conclusion was that following such an event, sufficient equipment (1 RHRSW pump and 1 DGCW pump) would remain available to safely shutdown the unit. The changes continue to ensure that the sufficient equipment will be available for use to safely shutdown the unit, therefore, the consequences of an internal flood of these areas is unchanged.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the flood protection seals are passive components. The basic test methodology (i.e. hook up air source, pressurize against barrier and check for leaks) has not changed. The test pressure has not changed. Recording the leakage rate does not physically affect the flood protection barrier. The substitution of a visual inspection of the flood barrier for damage every other cycle in lieu of a leakage test is justified based on historical experience. These changes clearly do not have the potential for creating a new or different type of accident or malfunction.

   Changing the test procedure to accept a small amount of cumulative leakage into an RHRSW vault will require that mitigating actions be taken to ensure the long term availability of the RHRSW and DGCW pumps in the vaults (e.g. for a condensate pump

room flood, pump out the area within 48 hours). In 1972, a similar volume of water flooded the condensate pump room and it was removed in approximately 24 hours. In the event the mitigating actions are unsuccessful or not taken, the unit can still be safely shutdown utilizing the RHRSW Crosstie system and the Station Blackout Diesel Generators. Neither of these systems had been installed when the flood barrier acceptance criteria was originally established. Based on this discussion, changing the acceptance criteria will not create the possibility of an accident or malfunction of a different type than previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the changes addressed by this Safety Evaluation are not associated with any Technical Specification requirements. The ability of the RHRSW pumps and the Diesel Generator Cooling Water pumps to perform their design functions is not affected by the changes.

Tracking No. SE-99-097
Activity No. UFSAR-99-R6-043

DESCRIPTION:

The first change revised the UFSAR description of the Standby Gas Treatment System (SBGTS) regarding SBGTS control switch positions and the effect on automatic initiation during a credible loss of electrical distribution scenario. The second change revised the UFSAR with regard to the Recombiner ventilation supply fan capacity.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the SBGTS and the Recombiner ventilation systems are not systems from which accidents or transients are initiated. Operation of the SBGTS occurs after accident initiation. Operation of the Recombiner ventilation system is not required for any accident. Therefore, there is no increase in the probability of the accidents identified above.

   This activity will not impact the ability of either train of the SBGTS from starting automatically from an initiation signal. Additionally, the ability of the SBGTS to process radioactive material released inside the secondary containment, and the ability of the SBGTS to maintain the secondary containment at a negative pressure following an accident is not affected. Since the post-accident functions of the SBGTS trains are not affected, there is no increase in the consequences of any accident.

   Operation of the Recombiner ventilation system is not required for any accident, therefore, there is no effect on the consequences of any accident.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because this activity revises the UFSAR to describe the current design of the SBGTS, and does not result in any physical changes to any SSC. This activity does not affect the normal or post-accident operation of the SBGTS. Since no SSCs or plant operating procedures are affected, there is no possibility that a new accident or transient will be created from those previously evaluated.

   This activity revises the UFSAR to reflect the actual supply fan capacity of the Recombiner ventilation supply fans. This activity has no effect on the design and operation of the Unit 1 or Unit 2 Recombiner ventilation systems. Since no physical or operational changes result from this activity, there is no possibility of creating an accident or transient from those previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this activity will not impact the operation of the SBGTS heaters, fans, particulate filters or HEPA filters, therefore, the SBGTS airflow rate and radioactive material removal capability of the SBGTS are not affected.

   Since the airflow rate of the SBGTS is not affected, there is no impact on the ability of the SBGTS to maintain the secondary containment at the required level of vacuum when the SBGTS is in operation.

   This activity will not impact the ability of either train of the SBGTS from starting due to an automatic or manual initiation signal.

   There are no Technical Specification requirements or safety limits which apply to the Recombiner ventilation system.

Tracking No. SE-99-098
Activity No. UFSAR-99-R6-036

DESCRIPTION:

This safety evaluation addresses the correction of the torque rating shown in UFSAR Section 9.1.4.2.2 for the hoist holding brakes of the reactor building overhead crane. Presently, 9.1.4.2.2 states that the hoist holding brakes have a maximum torque rating of 200% of motor torque. The crane manufacturer states that in fact the hoists have two independent brakes, each one with a torque rating of 100% of motor torque. The text of UFSAR Section 9.1.4.2.2 is revised to correct this statement. No physical changes are actually made to any crane component.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not

increased because the change made to the UFSAR is a correction of the stated rating of one of the crane's safety features. As corrected by this change, the crane continues to satisfy the redundancy requirements of NUREG 0612. The accidents in which the crane are involved are load drop accidents, and these load drops are assumed to occur without regard to any feature of the crane specifically designed to prevent a load drop. Therefore, a change involving one of these features does not increase the probability or consequences of any accident or malfunction. There is also no change to any factor or component which could increase the consequences of the load drop accidents such as weight or structural characteristics of the loads or their postulated targets.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because no physical changes are made to the crane or any of it's components. The safety features of the crane do not factor into the postulation of load drops, so a change in the description of one of these features can not lead to an accident or malfunction of a different type than previously evaluated. There are no changes made to the weight of the shipping casks, so there would be no change to the structural consequences of the drop and thus no possibility of new secondary failures resulting from the drop. Additionally, no changes are made to any of the weight, structural characteristics, or load paths of any of the other components handled by the reactor building overhead crane. Therefore, no factor is introduced which could lead to the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change evaluated is to the rated capacity which the UFSAR states for one of the safety features of the reactor building overhead crane. The capacities and safety features of the reactor building overhead crane have no direct or indirect effect on any margin of safety expressed or implied in the basis for any Technical Specification.

Tracking No. SE-99-099
Activity No. UFSAR-99-R6-037

DESCRIPTION:

This safety evaluation addresses the correction of the storage capacity of the New Fuel Storage Vault shown in UFSAR Section 9.1.1.2. Presently, 9.1.1.2 states that the vault can hold a maximum of 60% of a core load of fuel bundles. The capacity of the new fuel storage vault is 610 fuel bundles. Since the existing design documents and criticality analysis reflect the correct capacity of the new fuel storage vault, this change is an editorial correction to the capacity which UFSAR section 9.1.1.2 states.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the change evaluated is a correction of the storage capacity of the New Fuel Storage Vault shown in UFSAR Section 9.1.1.2. The primary concern with the storage of new fuel is the potential for inadvertent criticality. Since no change is made to any parameter which could lead to an increase in the potential for inadvertent criticality, the activity does not increase the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because no physical changes are made to the new fuel storage vault, the new fuel storage racks in the vault, or to vault plugs installed over the vault. There are no changes to any system or structure which surrounds or supports the vault in any way, no changes in any interactions of the vault with other plant systems, and no new systems, structures, or components are added. Therefore, no mechanism is introduced which could lead to the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the storage capacity of the new fuel storage vault has no direct or indirect affect on the bases of any Technical Specification. Therefore, the activity does not reduce the margin of safety as described in the basis for any Technical Specifications.

Tracking No. SE-99-102
Activity No. UFSAR-99-R6-044

DESCRIPTION:

This change revised the UFSAR and the implementing procedures to refine the actions taken during an external flood. The current revision of the UFSAR requires welding of a 14-inch pipe to connect the RHR system to the RHRSW system. The RHRSW system would then be used to pump river water into the RHR system and into the torus to fill it. The revision uses an existing 6 inch fire hose and connection to the RHR system at the Drywell Spray Isolation valves to pump river water into the RHR system and then into the torus.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the method of coping with an external flood is independent of the probability of the flood. The flood will have already have been predicted and the river level

rising before any physical changes will have been made to the plant. The change to the method to cope with the external flood event does not change the consequences of the flood transient, as this method will complete the necessary protective actions in the same timeframe as the original method. The connection can be made quickly and the start of river water flow into the torus can start much earlier than under the previous method. The units will already be in cold shutdown and shutdown cooling will be in operation on the other loop of RHR.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because using this method to fill the torus will not create a different accident or transient. The use of the fire hose connection is non-intrusive. The hose and connections have been tested under the modification testing associated with Design Change Packages (DCP's) 9700026 and 9700038. The connections are known to be leak tight and the hoses have been pressurized with water. The hose ratings are consistent with the pressures and temperatures that they will experience from the fire system and were designed to be used to put fire water into the containment for an Appendix R event. Since the hoses would only be used in this type of event and since the method has been tested under the referenced DCP's, a different accident or transient (such as an internal flooding event) is not created.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the addition of water to the containment would only be made after entering modes 4 or 5 and therefore, does not affect the Technical Specifications for containment or use of RHR.

Tracking No. SE-99-107
Activity No. QCOP 1000-43, Rev. 0,
BYPASSING REACTOR PRESSURE SHUTDOWN COOLING ISOLATION

DESCRIPTION:

This is a new procedure that provides the direction needed to bypass the Shutdown Cooling (SDC) mode of RHR high Reactor pressure permissive isolation logic when the Reactor is in Modes 4, 5, or NONE.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because all jumpers are verified during installation and during removal. With the SDC high pressure permissive signal temporarily bypassed, the motor operated isolation valves will not automatically close if a high-pressure signal becomes present. This isolation purpose is to protect the high/low pressure interface for the SDC suction piping while the low level isolation purpose is to protect inventory loss. A valid high-pressure signal cannot

occur because the Reactor head will be removed. The Reactor low water level signal for SDC isolation will still be active. Since performing this procedure only bypasses the high-pressure signal, the probability of occurrence of any accident or transient will not increase. Since performing this procedure only affects the high-pressure permissive signal for SDC and not the low-level logic, the SDC isolation will still occur if a low-level signal is received. The consequences of any accident or transient are not affected and will not increase because of the performance of this procedure and because the low level isolation logic is still available.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the jumpers will only be installed after the Reactor head is removed therefore, making it impossible to have a high-pressure condition where SDC would have to isolate from Reactor high pressure. The jumpers will be removed prior to Reactor head re-installation. Administrative controls have already been approved to ensure this procedure will be performed at appropriate times. The jumpers will be installed to bypass the high-pressure permissive signal and not affect the SDC low level isolation signal. The jumpers will bypass the SDC high-pressure permissive signal only. This will prevent an unnecessary isolation and loss of SDC during refuel operations if any part of the high-pressure logic were to fail. It will not affect the low-level SDC isolation logic. There are no new failure modes created by installing these jumpers.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the isolation actuation instrumentation automatically initiates closure of the SDC isolation valves which are necessary to prevent or limit the release of fission products from the reactor coolant system, the primary containment and the secondary containment in the event of a loss-of-coolant accident or other Reactor Coolant Pressure Boundary (RCPB) leak. The isolation instrumentation includes the sensors, relays, and switches that are necessary to cause initiation of primary and secondary containment and RCPB system isolation. Functional diversity is provided by monitoring a wide range of dependent and independent parameters. Redundant sensor input signals for each parameter is provided for initiation of isolation. The margin of safety is not affected because the high-pressure isolation (cut-in permissive) is not required to be operable in the Modes the Reactor will be in prior to procedure performance. The low-level isolation logic will not be affected. It should be noted that the NRC SER for Technical Specification Amendments 164 and 160, dated 11-20-95, has already addressed the required operability of the SDC low pressure cut in permissive. That document has stated the Technical Specification changes in the amendment do not pose any decrease in safety, or an increase in the probability of an analyzed or unanalyzed accident and therefore, found the changes acceptable.

Tracking No. SE-99-112
Activity No. UFSAR-99-R6-071

DESCRIPTION:

This activity revises the UFSAR description of the Standby Gas Treatment System (SBGTS), the Control Room Emergency Ventilation System (CREVS), the Toxic Gas Analyzer (TGA), and the High Radiation Sampling System (HRSS) HVAC system. The revisions are necessary to more fully describe system design functions and parameters, and to make minor technical changes.

This activity has no effect on the operation of the SBGTS, the CREVS, the TGA, or the HRSS HVAC system.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the SBGTS, the CREVS, the TGA system and the HRSS HVAC system are not systems from which accidents or transients are initiated. Operation of the SBGTS, the CREVS the TGA system, and the HRSS HVAC occurs after accident initiation. The automatic and manual functions of these system are not affected by these changes. There are no changes that will affect the off-site dose release or impact to the operators.

   This activity revises the UFSAR to describe the current design of the SBGTS, the CREVS, the TGA system and the HRSS HVAC system and does not result in any physical or operational changes to any SSC. Since no SSC is affected by this activity, there is no effect on equipment failures or malfunctions.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because this activity revises the UFSAR to describe the current design of the SBGTS, the CREVS, the TGA system and the HRSS HVAC system components. This activity does not result in any physical changes (directly nor implied) to any SSC. This activity does not affect the normal, or post-accident operation of the SBGTS, the CREVS, the TGA system, or the HRSS HVAC system. These changes do not affect applicable accident or change analyses. Since no SSCs, or plant operating procedures are affected, there is no possibility that a new accident or transient will be created from those previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the changes to the UFSAR are descriptive in nature and do not impact any Technical Specification or Technical Specification bases. Therefore, the safety margin has not been reduced.

Tracking No. SE-99-113
Activity No. UFSAR-99-R6-047

DESCRIPTION:

Update UFSAR Figures 9.3-1 and 9.3-2 to match the current as built condition of the plant. This involves; deleting some filters and manual bypass valves that do not exist, adding coalescing filters and associated bypass valves to the service air back up tie in, and redrawing U2 air dryer bypass system. There will be no change in the UFSAR text since the components discussed in the text reflect the actual plant layout. No physical work is being performed to make this change. There is no affect on the operation of the instrument air system as described in the text of the UFSAR.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the text describes the system appropriately and does not credit the existences of the manual bypasses around the post- and pre- filters. To completely lose Instrument Air would require multiple failures by mechanical components such as filters, valves, and compressors. The probability of a total loss of instrument air has not changed.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the changes to the UFSAR figures will not create any new failure modes since the changes to figures change components to reflect the current description in the text. Since there are no new functions or components added, there can be no new failure modes.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because Instrument Air is not described in the Technical Specification or any of it's bases. The additional equipment does not affect the way safety-related equipment will respond to an accident or transient.

Tracking No. SE-99-114
Activity No. UFSAR-99-R6-050

DESCRIPTION:

This change removes Division II Off Gas Log Radiation Monitor and Steam Line Monitor from RPS Bus B and changes the breaker to SPARE on UFSAR Figure 7.2-3.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the Main Steam Line (MSL) Rad Monitor and the Off Gas Monitor are used to measure the release by these accidents. The MSL Rad Monitor does initiate an MSIV when the fission products are detected in the main steam above the setpoint. Changing the power feed from RPS Bus to ESS Bus will not affect the function of the Rad Monitors. Because these monitors do not control any of the functions associated with these accidents, there is no increase in the probability of an occurrence.

   Because these monitors are now fed from the ESS Bus, the consequences of a loss of Offsite AC power are now decreased. The monitors will still be functional without offsite power. An MSIV Closure will not occur until there is low steam line pressure.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because this change of power feeds will not create the possibility of an accident or transient of a different type. This change will correct the discrepancy between the analysis given in Section 8.3.1 of the UFSAR and the logic scheme. This change will not affect equipment failures or malfunctions. The Rad Monitors will still be supplied by 120 VAC power. No other changes to the equipment were done.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the MSL Rad Monitor Setpoint will not be changed from the change of power feeds. The SJAE Off Gas Rad Monitor although not described in the Technical Specification, is referred to in the ODCM by Technical Specification 5.1.C and is similarly unaffected.

Tracking No. SE-99-115
Activity No. TS Bases 3 /4.9

DESCRIPTION:

Changed the reference in Technical Specification B 3 /4.9 for test method of diesel generator fuel oil for water and sediment from ASTM D1796 to ASTM D2709.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the changed method for diesel fuel oil water and sediment assures the same or higher quality of fuel oil to the diesel which results in no negative impact on diesel operation.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the changed method for diesel fuel oil water and sediment assures the same or higher quality of fuel oil to the diesel which results in no change to any plant system or structure.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the changed test method does not change the performance of the diesels; therefore, it does not reduce the margin of safety.

Tracking No. SE-99-117
Activity No. UFSAR-99-R6-040

DESCRIPTION:

This activity revises the description of the testing performed on the Standby Liquid Control (SBLC) containment isolation valves, 1(2)-1101-15&16, contained in UFSAR Section 9.3.5, page 25. This revision states that a local leak rate test (LLRT) is performed on the valves. Reference to testing by use of a bleed-off between the two valves is deleted.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the SBLC containment isolation valves will continue to be adequately tested by local leak rate and flow testing. The design and operation of the valves are unchanged.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because there are no new or changed interactions with other structures, systems, or components.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the margin associated with containment leakage and peak containment pressure following a LOCA is unchanged because testing will continue to ensure that leakage remains within acceptable limits and there are no changes to the amount of energy released to primary containment or to the pressure suppression capability of primary containment.

Tracking No. SE-99-121
Activity No. UFSAR-99-R6-063

DESCRIPTION:

This UFSAR change will revise Tables 8.3-1, 8.3-2, 8.3-3, 8.3-4, 8.3-5, and 8.3-6, which are associated with electrical ratings and loading of plant equipment. Tables 8.3-2 and 8.3-3 will be revised to show the actual connected load to the Emergency Diesel Generator (EDGs) for both LOOP and LOOP concurrent with LOCA conditions. Tables 8.3-4 and 8.3-5 will be revised to reflect as-built conditions for connected load of the 250 VDC and 125 VDC systems. Table 8.3-6, which was deleted by an earlier change (UFSAR change 97-R5-078) will be reinstated into the UFSAR using loading data extracted from the ELMS database. The table of contents for UFSAR section 8.0, as well as other text, will also be revised to reflect the above changes. The UFSAR is being revised to reflect as-built conditions based on input from other controlled sources. It does not evaluate any changes in loading.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the changes to the wording and tables in the UFSAR will have no affect on plant operation. The loading and ratings shown in these tables are derived from the current revision of applicable calculations, databases, diagrams, etc. Revision of these tables to agree with as-built conditions will not affect operation of the EDGs, the batteries, or the buses that connect them. The changes made to the UFSAR will not increase the probability of any accident or transient.

   The consequences of an accident or transient would be unaffected by these changes to the UFSAR. The EDGs would still start and carry the required load. The stations batteries would still be available for the operation of HPCI, RCIC, and the various 480 volt and 4160 volt circuit breakers. All of the information contained in these tables is found in other controlled sources (i.e. calculations, key diagrams, vendor manuals). Since the affected information can be found at other locations, updating the UFSAR with this information will not increase the consequences of an accident or transient.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the transfer of information from controlled sources to the UFSAR will have no adverse affects on the plant or its equipment. The information that will be used to revise the UFSAR is already available and is in use by station personnel. These changes involve equipment loading, equipment ratings, and connected load. This information is already available in controlled calculations, key diagrams, vendor manual, and databases, all of which are available to station personnel. The transfer of this information to the UFSAR cannot create the possibility of a malfunction of a different type that was previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the changes that will be made by this UFSAR change will only involve the transfer of information from one controlled source to another. Since this information is already available to station personnel, the margin of safety as defined by the Technical Specifications is not reduced.

Tracking No. SE-99-125
Activity No. UFSAR-99-R6-057

DESCRIPTION:

This change inserts a qualifier to the Emergency Diesel Generator (EDG) auto-start signals at UFSAR Section 8.3.1.6.4 on page 8.3-10.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the clarification will not affect the Auto Start signals to the EDG. The EDG will still auto start and load to the bus when the signals and permissives are met. The EDG will still be able to supply power to the ESS buses upon loss of normal power.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the clarification will not affect the failure of the EDG to start or load. Its only purpose is to clarify what one of the auto start signals is for. There is no change to the equipment or the logic.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the clarification will not affect the failure of the EDG to start or load. Its only purpose is to clarify what one of the auto start signals is for. There is no change to the equipment or the logic.

Tracking No. SE-00-001
Activity No. UFSAR-99-R6-054

DESCRIPTION:

Revision to Section 6.6.6 of the UFSAR which currently states, "Flaws detected in Class 2, 3 and MC component examinations are evaluated according to the requirements of ASME Section XI, Articles IWA-3000, IWB-3000 and IWE-3000". The sentence was changed to state, "Flaws

detected in Class 2, 3 and MC component examinations are evaluated according to the requirements of ASME Section XI as described in the approved ISI Program Plan."

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the determination as to whether an indication exists is based on data obtained during ISI Non-destructive Exams (NDE). These NDE exams do not change the physical condition of the plant and the results are used to determine the condition of the components. The revision to Section 6.6.6 of the UFSAR does not change any component Code Classification nor does it change the physical condition of the plant. ISI Components will be inspected to the same requirements they have been in the past. The only change is that when an indication is identified, it will be evaluated per the ISI Program Plan. Evaluating flaws per the ISI Program Plan does not increase the probability of a LOCA resulting from piping breaks inside Containment.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the change to section 6.6.6 of the UFSAR does not involve any physical change to the plant. Additionally, ISI component Classification and Examination scheduled are not being altered from the currently approved program. The change is to clarify that when an indication is identified, it will be evaluated per the approved ISI Program Plan. Evaluating flaws per the ISI Program Plan does not create the possibility of an accident or transient of a different type than previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change to Section 6.6.6 of the UFSAR does not reduce the margin of safety as described in the Technical Specification basis. The basis states that the structural integrity of the ASME Class components will be maintained at an acceptable level throughout the life of the plant. The ISI Program Plan with the purpose of inspecting the plant to ensure structural integrity is maintained. Therefore, the change is in agreement with the Technical Specification basis in that the structural integrity of ASME Class components will be inspected, evaluated and hence maintained throughout the life of the plant.

Tracking No. SE-00-004
Activity No. AR 13704-04, UFSAR-99-R6-064

DESCRIPTION:

This UFSAR change is being generated to explicitly define in Section 9.2.1.2 the Residual Heat Removal Service Water (RHRSW) design basis flow and pressure requirements. This change will also state in Section 9.2.1.4 that the RHRSW pumps will be tested on a quarterly basis where the

flow (3500 gpm) and pressure (198 psig) requirements, as measured at the RHR Heat Exchanger SW Outlet, will be verified. Sections 9.2.1 and 9.2.1.1 are being revised to provide cross references to other UFSAR Sections which provide additional description.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because this UFSAR change does not affect the probability or the consequences of an accident or malfunction because this change does not physically alter any equipment or the operation of any system in the plant. This change simply states the design basis requirements for the RHRSW pumps. These values were previously identified in the Technical Specification - but were omitted when the Technical Specification Upgrade Program (TSUP) was implemented for the RHRSW system. It is noted that these stated RHRSW pump parameters are unchanged from those previously identified design basis documents, including the calculation that was reconstituted to verify that these existing required values were valid. Stating these parameters in the UFSAR ensures as a course of record, that the required pump performance requirements (flow and pressure) are readily identified, tested, and documented in the UFSAR.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because this UFSAR change does not physically alter any equipment in the plant, it simply clarifies the design parameters of the RHRSW pumps. The operation of the RHRSW system is also unchanged. Since the design function of the equipment and operation of any system remains unchanged, this UFSAR change will not create the possibility of an accident or transient of a different type that has been previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this UFSAR change does not physically alter any equipment in the plant. The operation of the RHRSW system is also unchanged. This change simply documents the design parameters of the RHRSW pumps that were removed by TSUP and not relocated to a licensing document. This UFSAR change restores these parameters thereby ensuring that the margin of safety is maintained. Since the design function of the equipment and operation of any system remains unchanged, this UFSAR change will not reduce the margin of safety as described in the basis for any technical specification.

Tracking No. SE-00-005
Activity No. QCOP 4400-19

DESCRIPTION:

Main Condenser Chemical Cleaning Procedure. This procedure will clean the main condenser by injecting sulfuric acid into the discharge of the circulating water pumps. The procedure will be

performed with the unit shutdown. Measures will be taken to control pH within limits for the system and the Circ water effluent to the river.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the injection of sulfuric acid into the Circ water system will not increase the probability of a piping failure which would increase the probability of a flooding event. The presence of sulfuric acid onsite will not pose a risk to control room habitability.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the injection of acid into the Circ water system will not introduce any challenges to the principal safety barriers in the plant because the condensate system will be isolated from the reactor.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the cleaning of the main condenser with sulfuric acid will not reduce the margin of safety, which in this case is an environmental limit (Circ water diffuser pH 6 to 9), since analysis has shown that the pH limits will not be violated.

Tracking No. SE-00-006
Activity No. UFSAR-99-R6-066

DESCRIPTION:

UFSAR-99-R6-066 revises the Expected Background values (identified in Table 12.3-3) for Unit 1 ARM's #32 & #33 from 1 mR/hr to 5 mR/hr for both ARM's. These values are consistent with the expected background at these detectors, and are consistent with the expected background for the Unit 2 counterpart ARMs, as well.

The Safety Evaluation was also used for DCP 9900252, which was not Op authorized during this report period. The summary will be included when the DCP becomes Op authorized.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because ARM's provide monitoring function only, and have no interaction with the reactor coolant pressure boundary. The affected ARM's are not used to mitigate an accident/transient described in the UFSAR. There are no new failure modes introduced. The ARM alarm setpoint value has no impact on the probability of a malfunction of the ARM. The consequences of a malfunction of an ARM remain the same, which are either

failure to provide information or providing of erroneous information. The new alarm setpoint value is low enough to provide timely warning of abnormal conditions.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because these changes affect an alarm setpoint only, such that spurious or invalid alarms during normal expected radiological conditions at the detectors do not occur, but low enough such that a timely alarm would be provided under abnormal radiological conditions. The ARM's provide a monitoring function only, that is independent of other plant equipment. The alarm setpoint changes and the UFSAR expected background value changes do not impact the functions provided by the ARM's, nor is any new failure mode introduced.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the ARM System is not required by Technical Specifications.

Tracking No. SE-00-007
Activity No. CRD-007: CRDM Exchange Procedure Using SLDES III, Revision 4

DESCRIPTION:

With the plant in Mode 5, the activity will allow the de-torquing of multiple Control Rod Drive Mechanism (CRDM) flange bolts with fuel in the vessel. The following sequence will occur, without a full core off-load, for each CRDM to be exchanged: applicable cell de-fueled, control rod withdrawn and uncoupled, all eight flange bolts de-torqued and then six bolts removed leaving two diametrically opposed bolts, snugged tight, to support the CRDM.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because this activity will not increase the probability of occurrence or the consequences of an accident or malfunction of equipment because an adequate barrier, preventing a LOCA in the applicable plant conditions, will always be maintained. During these plant conditions the available source term and driving head for leakage will be substantially less than when the plant is operating; the conditions assumed for the design basis LOCA analysis.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because this activity does not create the possibility of an accident or malfunction of a different type since the effects of potential leakage are bounded by the design basis LOCA, the CRDM has no reactivity control function in these plant conditions, and the failure of the CRDM flanged joint would have essentially the same effect as the failure of the CRD housing, which has been evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this activity does not impact the margin of safety for any Technical Specifications.

Tracking No. SE-00-009
Activity No. QCOP 1000-44, Rev. 0

DESCRIPTION:

Systems that cool the fuel pools can also be used as an alternate method of decay heat removal from the reactor cavity during refueling outages when the reactor cavity is flooded above a level of 23 feet (above the vessel flange). When the gates between the reactor cavity and the fuel pool and between the two fuel pools are removed, a natural circulation develops between the reactor cavity and spent fuel pools due to the temperature and density differences between the three bodies of water. To qualify this alternate method of decay heat removal, an analysis is performed prior to the refueling outage to evaluate the heat load in the reactor vessel and spent fuel pools that will be unique to each refueling outage. The heat load is calculated using the methodology described in NRC Branch Technical Position ASB 9-2. From the heat load, the required number of Fuel Pool Cooling (FPC) system trains and Residual Heat Removal (RHR) loops aligned to fuel pool assist (FPA) are determined. It may be necessary to route a portion of the cooling flow directly to the refueling cavity instead of the fuel pool. Conservative values for the RHR service water temperature and Reactor Building Closed Cooling Water (RBCCW) are determined based on the time of year during which the refueling outage occurs. This analysis demonstrates that the temperature of the water in the reactor cavity will not exceed Technical Specification limits if specified FPC and/or RHR-FPA system flow rates and cooling water temperatures are maintained. Requirements for fuel pool cooling as described in UFSAR Section 9.1.3.1 must also be satisfied. Furthermore, analysis is performed to show that no local boiling will occur on the surface of the fuel rods. Administrative controls are procedurally implemented and the water temperature in the reactor cavity and the fuel pools is monitored to ensure compliance with the analytical assumptions and results such as time, flow, and temperature limits.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because this activity has no affect upon the initiators of the flooding or dam break scenarios. This procedure does not control the movement of fuel or degrade the equipment used to move fuel. This procedure will not affect the administrative pool temperature limit at which fuel movement is ceased. The temperature elements will be adequately restrained to ensure they do not fall down into or inadvertently move around the reactor cavity or fuel pool. This procedure controls the operation of the fuel pool cooling system; however, it does not affect the reliability of the equipment in the fuel pool cooling system. Operating with the gates open and the fuel pools connected to the reactor cavity does not increase the likelihood of a malfunction of any equipment in the fuel pool cooling system. Engineering analysis is performed, and the reactor cavity is monitored to ensure that the water

temperature is maintained within the previously established acceptance limits. Additional analyses demonstrate that acceptance limits for time to boil and boiloff rate are met under a loss of fuel pool cooling scenario. Additionally, none of the assumptions or parameters for analyzing the consequences of a cask drop accident or a Design Basis Fuel Handling Accidents During Refueling, such as cask weight, height from which it is dropped, fuel and bundle characteristics, or structural features of the spent fuel pool are changed. None of the barriers or mitigation systems for a dam break or flooding scenario are affected by this alternate decay heat removal method.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because no new failure modes are created. No new or different types of hazards are introduced. The addition of the temperature elements to the reactor cavity and/or fuel pools do not create any new credible failure modes to the fuel pool or fuel pool cooling systems. The procedure will utilize existing channels between the reactor cavity and the fuel pool that are normally open during a refueling scenario and will credit the fuel pool cooling system which is normally in operation. The performance of the fuel pool cooling system and the spent fuel storage system is not degraded by this change. Additionally, this activity does not create a new interaction between the two fuel pools if the FPC system should fail on one of the units. Per QCOA 1900-02 and 1900-03, on a loss of FPC or on a high temperature alarm, the gates can be removed between the two fuel pools such that the other fuel pool and FPC system can be used to provide cooling to the other pool. This is consistent with the 1982 SER which stated that it is possible to "use the cooling system in one unit to assist cooling the pool water in the adjacent unit pool. This could be accomplished by opening the two gates in the transfer canal and allowing an interchange of water between the two pools." Therefore, the change does not create the possibility of any accident or transient of a different type than previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the purpose of this change is to allow the planned use of an alternate method capable of decay heat removal as allowed by TS 3/4.10.K. Engineering analysis is performed and the water temperature in the reactor cavity and fuel pools is monitored to ensure that the temperature is maintained within the acceptance limits defined in the Quad Cities Licensing Basis and the engineering analysis. This includes maintaining the reactor cavity temperature below 140° F as required by plant Technical Specifications during REFUELING (Mode 5). The heat load is calculated using the methodology described in NRC Branch Technical Position ASB 9-2, and the temperature behavior of the reactor cavity is predicted using additional conservative assumptions that result in a conservatively high temperature prediction. The performance of similar alternate decay heat removal analyses and procedures at Dresden and LaSalle stations has verified that the actual temperature behavior is significantly less than the temperature predicted by the engineering analysis. Therefore, the analysis performed for the alternate decay heat removal method and the temperature monitoring of the reactor cavity water as part of the procedure will ensure that the Technical Specifications temperature limit is maintained; therefore, this activity does not reduce the margin of safety associated with any Technical Specification.

Tracking No. SE-00-010
Activity No. QCOS 6600-20 Rev. 19

DESCRIPTION:

This document changes the VARS requirement for loading to -300 to +300 kVARS. This will decrease the amount of reactive power being produced by the Emergency Diesel Generator (EDG). It increases the time allowed for the voltage to level out below 5,000 volts, from 1 second to 3 seconds.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the probability of an occurrence of an accident or malfunction has not changed since this is a change to test procedure which is not a precursor to any accident. The consequences of failure are no different than previously evaluated. Performing this test at a higher power factor will lower excitation on the EDG, thereby reducing the possibility of damaging the EDG during testing due to excessively high generator voltages during load rejection.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because there are no new components' test methods created by this change. Therefore, no new failures or malfunctions have been created.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because reducing the power factor at which the test is performed and increasing the timeframe describing a momentary transient do not reduce the margin of safety. The test acceptance criterion have not been changed, and this assures that the EDG is able to perform its needed safety function.

Tracking No. SE-00-012
Activity No. QCMM-0201-04 Rev. 10

DESCRIPTION:

There are 4 major changes that are being made to the Reactor Disassembly procedure:
In change 1, Reactor Mode 3 (Hot Shutdown) has been added as an allowed mode to start initial disassembly (reactor shield plug removal) steps of this procedure. Change 2 is the addition of pre-requisite steps requiring validation of calculation BSA-Q-99-07 (Clad Temp in a LOCA versus Time After Shutdown) for the current core load.

Change 3 was the addition of other prerequisites for the shield plug removal sequence if that sequence was to be performed while in Mode 3. These prerequisites ensure that shield plug removal can be performed in accordance with Technical Specifications (ECCS), eliminate the hazard posed by turbine missiles and ensure the time requirements calculated within BSA-Q-99-07 are observed. Change 4 was made throughout the procedure to improve format, update references, improve sequencing, and to correct and improve wording. This final change is essentially administrative in nature and does not change the intent of any of the affected sections.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the change, which allows the shield plug removal to begin in mode 3, does not have any credible means changing accident or malfunction probability. LOCA probability is unchanged as the change does not weaken reactor piping nor does it place any extra-ordinary stresses on the piping. The probability of Turbine Missiles is unchanged because the change in no way weakens the turbine rotors or blading structure. The change does not place any extraordinary stresses on the turbines. The change does not operate the turbine at or near a resonance critical speed. The change does not operate the plant in any way so as to make catastrophic introduction of water into the turbine more likely. The probability of Missiles Generated by Natural Phenomena is unchanged because nothing in the changes has any means of affecting tornado probability.

   Changes to the consequences of the subject accidents / transients is precluded by the new prerequisites incorporated into the procedure. The time after shutdown limit calculated will ensure that if a LOCA occurs, that Peak Clad Temperature will remain below its limit thus ensuring that the cladding remains intact. The vulnerability to turbine missiles created by removing shield plugs is mitigated by ensuring the turbine is tripped and the Extraction Steam Non-return Check Valves are operable which acts to remove the driving energy for turbine disintegration and attendant core breech. Consequences of Missiles from natural phenomena are precluded by procedural steps that require the shield plugs to be re-installed if a Tornado Warning is declared and the plant is in Mode 3.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because a possible new event was considered in the evaluations of the proposed activity. The new event is a turbine missile from the operating unit. UFSAR Section 3.5.3, 2nd paragraph identifies that "turbine missiles would fly away circumferentially". Since the subject unit's shield plugs are approximately 45 degrees from the operating unit's turbine shaft radial direction, the subject unit would not be affected by a turbine missile from the other unit and this new type of accident / malfunction was not considered credible.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no affected Technical Specification Bases were identified for this change.

Tracking No. SE-00-013
Activity No. DCP 9900294; UFSAR-99-R6-070

DESCRIPTION:

This change reflects the replacement of the 2A Reactor Building Floor Drain Sump (RBFDS) pump with a submersible type pump. In addition, the 2-89026-1"-H line will be partially removed and capped. This line contains the 2-8941-731 valve and was part of the High Radiation Sampling System (HRSS). This portion was never used and has been abandoned in place, tag 95-048. A change to the UFSAR sections discussing RBFDS flow rates and usage during a spent fuel cask drop accident has been made. The replacement 2A RBFDS submersible pump has a slightly lower pumping capacity than the original pedestal pump. However, the pump will perform the system requirements associated with the reactor building floor drain sump system.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because a spent fuel cask drop accident is no longer considered a design basis accident. Modifications were made to the Reactor Building crane which preclude postulated drops of a 100-ton spent fuel shipping cask. Based on these crane modifications chapter 15.7.3 is no longer a credible accident basis for Quad Cities Nuclear Station. The Spent Fuel Cask Drop scenario has been reanalyzed and is not considered a credible "Design Basis Accident". This is documented in a letter from Dennis L. Ziemann, Chief Operating Reactors Branch #2, to Mr. R. L. Bolger, Assistant Vice President, Commonwealth Edison, dated January 27,1977. Enclosure 2 to this letter is the safety evaluation prepared by the office of Nuclear Reactor Regulation supporting approval to facility modification to reduce the probability of a fuel cask drop accident to an acceptably low level. This evaluation state that modifications to the Reactor Building crane were made to preclude drops of a 100-ton-spent fuel shipping cask. The modifications to the crane combined with administrative controls prevents all postulated single component failures. This means the Spent Fuel Cask Drop Accident is no longer considered a credible "Design Bases Accident".

   Changing the RBFDS pump from a pedestal pump to a submersible will not increase the probability of an accident since the RBFDS does not interface with the reactor building crane.

   The HRSS sample line from the RBFDS (2-89026-1"-H), and its associated valve, is not credited as a sample line required for the HRSS. This line and valve are not discussed in the UFSAR and will not increase the probability of an accident by disconnecting them. The 2-8941-731 valve does not initiate any cask drop events.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the changes to sections 9.1.2.2.3.1 and 15.7.3 are for the deletion of a design basis accident analysis from the UFSAR. The deletion of a dropped spent fuel cask accident scenario does not create the possibility of an accident or transient of a different type than previously evaluated.

   The RBFDS system and pump are simply part of the radwaste input system and could not in themselves create a new type of accident or transient since this is a pump replacement with a different type of sump pump. There is no functional change to the floor drain system operation as a result of this change.

   The abandoned HRSS line and valve were designed (but never used) only for post accident sampling and could not in themselves create a new type of accident or transient with their disconnection.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there are no Technical Specification sections related to RBFDS, spent fuel casks, or the HRSS sample line from the RBFDS.

Tracking No. SE-00-014
Activity No. Procedure QCOP 0500-07, Rev. 1
BYPASSING "A" CHANNEL OF THE REACTOR MODE SWITCH TO SHUTDOWN SCRAM

DESCRIPTION:

This procedure installs a jumper around the 0590-116A and 0590-115A contacts in the "A"Reactor Protection System (RPS) manual scram circuit. This will prevent the interruption of RPS power to manual scram subchannel trip relays 590-109A and C when the Reactor Mode Switch is moved to the SHUTDOWN position.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the jumper will be placed on terminal blocks that the mode switch is connected to. No work will be performed directly on the mode switch. The jumper will only be placed in the logic for the manual scram relays for "A" channel (0590-109 relays) and will be removed immediately after the mode switch is moved to the SHUTDOWN position. The jumper will not affect any other mode switch functions. The jumper will only be placed when all rods are at position "00" (fully inserted). The jumper will not affect the REFUEL or STARTUP functions of the mode switch or bypass the rod block function of the SHUTDOWN position.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the jumper will only be placed when all rods are at position "00" (fully inserted). The jumper will not affect the rod block function of the SHUTDOWN position. The jumper will be removed immediately after the mode switch is moved to the SHUTDOWN position. Per UFSAR paragraph 7.2-40: "This scram is not considered a protective function because it is not required to protect the fuel or nuclear system process barrier, and it does not act to minimize the release of radioactive material from any barrier."

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because per the PREREQUISITES of the procedure to install this jumper, all 177 control rods must be fully inserted, the reactor mode select switch ready to be moved from the STARTUP position to the SHUTDOWN position and no half scrams present on "A" RPS channel or half scram testing in progress. Installing this jumper will place the Unit in an ACTION statement to place the inoperable channel(s) and/or that trip system in the tripped condition within 1 hour but an inoperable channel need not to be placed in the tripped condition when this would cause the trip function to occur. In this case, the inoperable channel will be restored to operable status as soon as the mode switch is moved and the jumper removed, or the action required previously would apply. The limits addressed in the Technical Specification are always maintained. Therefore, the margin of safety is not changing.

Tracking No. SE-00-015
Activity No. DCP 9900303

DESCRIPTION:

This Temporary Modification (TMOD) will install a temporary hose for the Reactor Core Isolation Cooling (RCIC) System Steam Line Drain, tapping off between valves 1-1301-34 and 35. The hose will be rated for at least 290° F and 100 psig, which represents the maximum temperature and pressure expected based on past testing. The hose will be routed to the Unit 1 Reactor Building Floor Drain Sump and discharge under the water level of the sump. The hose will be adequately secured to prevent it from coming out of the sump during operation. The RCIC Steam Trap Bypass Valve AO 1-1301-32 will be taken Out of Service closed for the duration of the hose installation. This measure will prevent the steam from bypassing the steam traps and exceeding the temperature or pressure rating of the hose. This will also minimize the amount of additional drainage and temperature loading on the Reactor Building Drain Sump, since only the condensate through the steam trap will be routed to the sump. The valve provides additional drain capacity around the steam trap when the condensed steam loads on the trap are high, which occurs during heat-up of the steam supply piping to the RCIC turbine when the steam supply is initially aligned. If the steam supply to the RCIC turbine is isolated, the valve will be returned to service before the steam supply to the RCIC turbine is re-established.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the installation of this TMOD has no affect upon the initiators of any Transients listed in the Safety Evaluation. This TMOD will provide a flow path from the steam trap while RCIC is in Standby Operation. This will ensure the availability of the RCIC to provide it design function. This flow path is isolated during RCIC operation; and will therefore, not affect operation of the RCIC turbine or pump following the transient. This TMOD does not affect any barriers or any other mitigating systems for these transients.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the basic functions of the RCIC system, including the steam line drain, have not been changed. This TMOD still provides continuous removal of undesirable condensate from the steam supply lines to the RCIC turbine through the temporary hose. If this TMOD were to fail to operate as intended, the result would be the same as if any of the existing valves or components in the drain flow path to the main condenser were to fail. If condensate is allowed to accumulate in the RCIC steam supply piping, the RCIC system could fail on start-up; however, this is an existing failure mode if the current drain line failed to pass the required flow. This TMOD does not affect the high level alarm that would alert the Control Room if this failure were to allow water to back-up in the drain piping. Other than the RCIC system, this TMOD does not affect any equipment important to safety.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this TMOD will provide a flow path from the steam trap while RCIC system is in Standby Operation. This will ensure the availability of the RCIC to operate if required. This flow path is isolated during RCIC operation; and will therefore, not affect the ability of the system to provide the flow rate required by Technical Specifications. Therefore, this activity does not reduce the margin of safety associated with this Technical Specification.

Tracking No. SS-H-99-0196
Activity No. QOP 5750-17 Revision 9; SE-98-074

DESCRIPTION:

a. Reflect that 1(2)-3999-562, High Pressure Coolant Injection (HPCI) Room Cooler Service Water Supply Header Downstream Stop Valve, is not locked closed.

b. Reflect that 1(2)-3999-570, High Pressure Coolant Injection (HPCI) Room Cooler Service Water Supply Header Upstream Stop Valve, could be in the closed position.

c. Reflect that Service Water could be valved in to the HPCI Room coolers during summer months for Environmental Qualification (EQ) reasons.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because Service Water is not relied upon to function during an accident. If the referenced valves are closed, flow from the Emergency Diesel Generator (EDG) Cooling Water system to Service Water can not occur. If the referenced valves are open, an unanalyzed flow path can not occur due to a check valve installed as a result of DCP 9800181 (9800182), the safety function of which is to close to prevent a flow path from the EDG Cooling Water system to Service Water.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because as stated in item 1, whether the referenced valves are open or closed, a flow path from the safety-related EDG Cooling Water system to the non-safety-related Service Water system will not occur.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because all changes to the parameters or conditions used to establish the Technical Specification requirements are in a conservative direction.

Tracking No. SS-H-99-0207
Activity No. QOM 1/2-6700-T13, Rev. 3 via DCP 9700180; SE-99-075

DESCRIPTION:

Revised procedure by deleting the evaporative cooler motor load from MCC 17/27-4.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the heating system is a support system used to maintain area temperatures. It cannot cause or mitigate the consequences of any accident or transient. The evaporative cooler was not operable and permanently disabled for an extended period of time.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the heating system is a support system used to maintain area temperatures. It cannot cause or mitigate the consequences of any accident or transient.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there are no Technical Specifications affected by this change and no margin of safety is affected.

Tracking No. SS-H-99-0215
Activity No. QCOP 2700-16 Revision 5,
HYDROGEN WATER CHEMISTRY VERIFCATION SYSTEM START UP, OPERATION AND SHUTDOWN; SE-99-066

DESCRIPTION:

Revise direction for operation of the Hydrogen Water Chemistry (HWC) autoclave skid. The existing autoclave skid is no longer required for measuring crack growth rates in monitoring HWC. This change incorporates actions for long-term monitoring of future noble metal injections on Unit 2.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the intent of the Hydrogen Water Chemistry (HWC) system is to prevent/retard Inter Granular Stress Corrosion Cracking (IGSCC) in pressure bounding vessels and components such as the Reactor Recirculation system piping. The new method enhances the HWC system by providing more effective utilization of injected hydrogen and providing a more accurate method of measuring the effectiveness of the HWC system. Therefore, the changes do not affect the ability of the HWC system to combat IGSCC.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because should a failure of the associated piping occur, the piping can be isolated by closing the RWCU containment isolation valves. Thus, no new unisolable leak path is created.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this change does not affect any parameters upon which Technical Specifications or safety functions are based.

Tracking No. SS-H-99-0217
Activity No. QOM 2-1200-01 Revision 5,
U2 REACTOR WATER CLEANUP (RWCU) VALVE CHECKLIST;
QOM 2-2700-01 Revision 8,
U2 H2 WATER CHEMISTRY VALVE CHECKLIST; SE-99-066

DESCRIPTION:

Add valves to this checklist to reflect configuration of plant as a result of DCP 9900131.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the intent of the Hydrogen Water Chemistry (HWC) system is to prevent/retard Inter Granular Stress Corrosion Cracking (IGSCC) in pressure bounding vessels and components such as the Reactor Recirculation system piping. The new method enhances the HWC system by providing more effective utilization of injected hydrogen and providing a more accurate method of measuring the effectiveness of the HWC system. Therefore, the changes do not affect the ability of the HWC system to combat IGSCC.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because should a failure of the associated piping occur, the piping can be isolated by closing the RWCU containment isolation valves. Thus, no new unisolable leak path is created.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this change does not affect any parameters upon which Technical Specifications or safety functions are based.

Tracking No. SS-H-99-0218
Activity No. QCOP 4100-03, Rev. 11, DIESEL FIRE PUMP OPERATION;
QCOS 4100-01, Rev. 12, MONTHLY FIRE DIESEL PUMP TEST;
SE-99-036

DESCRIPTION:

Have revised the procedures to reflect installation of mechanical speed indicator, speed switch, and associated wiring from DCP #9900038.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the changes are confined to a portion of the engine protection controls of the diesel fire pumps and do not change the method of operation or adversely affect the pump's ability to perform their design function. These changes cannot affect the probability of a fire's occurrence or consequences of a fire as the pump's capacity is not changing and the pump will still perform its safety function.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the changes are confined to a portion of the engine protection controls of the diesel fire pumps and do not change the method of operation or adversely affect the pump's ability to perform their design function. These changes cannot affect the probability of a fire's occurrence or consequences of a fire as the pump's capacity is not changing and the pump will still perform its safety function.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the system is designed to function with a single equipment failure (loss of one diesel fire pump) and no new accidents are created by these changes.

Tracking No. SS-H-99-0219
Activity No. UFSAR-99-R6-046

DESCRIPTION:

The UFSAR is being changed in Section 4.6.5.1 for the extension of Control Rod Drive (CRD) exercising frequency to support a Technical Specification change, Amendment Nos. 190 and 187 for Unit 1 and Unit 2 respectively. The surveillance frequency is being changed from once per 7 days for all CRDs to once per 7 days for fully withdrawn rods and once per 31 days for partially withdrawn rods. This validation was used to document that the NRC SER has been used to support the UFSAR change.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the change extends the surveillance frequency for partially withdrawn control rods. The change does not affect equipment design or operation. The affected surveillance is not considered to be an accident initiator. Also, extension of the surveillance frequency will not impact the ability of the system to perform its function following an accident.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the extension of the surveillance frequency does not involve physical modification to the plant and does not introduce a new mode of operation. Therefore, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the current Technical Specification requirement places undue burden upon plant operation without an increase in the margin of safety. The current surveillance requirement is restrictive in requiring a notch exercise of all rods every 7 days. The reduction in control rod manipulations decreases potential power changes and is prudent core management by reducing the frequency of having to cycle control rods from their intermediate positions. This change does not decrease the margin of safety.

Tracking No. SS-H-99-0220
Activity No. QCIS 1000-05 Revision 6; SE-97-158

DESCRIPTION:

This change incorporates into QCIS 1000-05, "High Drwell Pressure Auto Blowdown/HPCI Initiation Calibration and Functional Test" Revision 6, testing specifically associated with the installation of the interposing relay associated with the PS 1-1001-88D instrument. Interposing relay was installed per DCN 001606E, DCP 9700416 and NWR 970119483, reference SE-97-158.

SE-97-158 was originally written to install a new interposing relay associated with PS 1-1001-88D due to a 10 CFR 50.59 Appendix R review. The review determined that when a fire occurs in a specific location in the reactor building, a hot short could occur that would cause the HPCI system to spuriously initiate. This spurious initiation could cause an inventory control issue and adversely impact the normal design function of HPCI. The installation of the interposing relay would prevent the spurious initiation of HPCI due to the hot short.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the failure of HPCI has been considered in the UFSAR and the UFSAR states that the core will be adequately cooled even if the HPCI system fails due to the backup ECCS subsystems to HPCI. ADS, RHR and Core Spray are unaffected by this design change and will act to mitigate the accident and cool the core. The probability of HPCI not responding has not increased since the new interposing relay is designed to the same codes and standards as the existing logic system relays. Therefore, the consequences of a LOCA or a malfunction of equipment important to safety have not been increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the new interposing relay is an HFA 125 VDC surface mounted, front connected, self-resetting relay. This relay is highly reliable and used extensively for safety-related systems throughout the nuclear industry and currently used extensively throughout the present HPCI logic circuit. The two failure modes inherent to relays (i.e.: failure to reposition upon receipt of a valid signal, and spurious repositioning in the absence of any signal) currently exists in the HPCI start logic. The seismic mounting of the relay in the panel has been evaluated and found acceptable. Therefore, no new failure modes were created with the addition of the new interposing relay under operating or emergency conditions.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because system parameters and technical specification parameters were not altered by the installation of the interposing relay; thus, the margin of safety is not reduced.

Tracking No. SS-H-99-0223
Activity No. QOM 2-3700-01, Rev. 6, U2 RBCCW VALVE CHECKLIST;
QOM 2-8800-01, Rev. 4,
U2 PRIMARY CONTAINMENT PARTICULATE VALVE CHECKLIST;
QCOP 8800-01, Rev. 8, OXYGEN ANALYZER SYSTEM OPERATION;
SE-99-041

DESCRIPTION:

Have revised two mechanical QOM procedures and one normal operating procedure to reflect installation of DCP #9600386. This modification removed the clean demineralized water as a source of cooling for the Containment Oxygen Analyzer Moisture Separator and in its place has placed Reactor Building Closed Cooling Water (RBCCW) as the primary source of cooling water.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the Primary Containment Oxygen Analyzer and the RBCCW System interface with the Primary Containment. These systems are isolated from the containment in the event of an accident and do not impact the probability or consequences of an accident. In addition, the modification does not change the probability of a loss of RBCCW or Oxygen Analyzer operation.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because there are no interactions that could create the possibility of an accident or transient different than those previously evaluated in the SAR. Both systems will function as designed, as there is no functional change to either system.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because Technical Specifications are not affected by these changes. The purpose of the Primary Containment Oxygen Sampling System is to monitor oxygen levels in the Primary Containment during normal operation. RBCCW provides cooling to essential plant equipment. Both systems will operate as before these changes and the margin of safety for any Technical Specification basis is not reduced.

Tracking No. SS-H-99-0233
Activity No. DCP 9900243 (TMOD 99-2-016); SE-98-154

DESCRIPTION:

The activity is to install a Temporary Modification (TMOD) to provide 480 VAC power to the loads that are normally fed from Bus 28 cubicle 5D. The loads fed from this cubicle are Regular Lighting Cabinets (RLCs) 31, 32, 34, 35, 36, 37, 38, 39, and 70. These RLCs provide power to various lighting and receptacles throughout the Unit 2 Turbine and Reactor Buildings. They also supply power to the Vent Stack Floodlights. The temporary power will be supplied from the Unit 2 Unstacking Transformer 1/2-7300-T42R5A. This transformer is fed from the 13.8 kV distribution system. A 480 VAC disconnect switch assembly will be connected to the service disconnect mounted near the Unstacking Transformer and a temporary cable will be routed from the disconnect switch assembly to cubicle 5D at Bus 28. The two existing feed cables will be disconnected from the load side of the breaker at Bus 28 and spliced into the temporary power feed cable from the Unstacking Transformer. The cables will enter Bus 28 through a rear compartment door. This door will be left open during the duration of the TMOD.

The reason this TMOD is being installed is because Bus 28 will be taken Out Of Service (OOS) during refueling outage Q2R15 for maintenance activities. This TMOD is being installed to reduce the amount of time that the affected non-essential loads (particularly lighting) will be unavailable.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the changes implemented by the activity are electrically isolated from Bus 28. Therefore, there will be no effect on any initiating events for any accident or transient and there is no increase in the probability of occurrence of any accident or malfunction important to safety previously evaluated in the SAR. During a loss of normal AC power, lighting and other loads fed from Bus 28 cubicle 5D will be lost as a result of the installation of this TMOD. However, Bus 29 and the Unit 2 Emergency Diesel Generator (Division II) will remain operable to mitigate the consequences of any accident, transient or malfunction in accordance with the SAR and Technical Specifications. Therefore, the consequences of any accident, transient or malfunction previously evaluated has not been increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the temporary power feed to the affected RLCs and other loads will be physically disconnected/isolated from other power and control circuits at Bus 28. The only effect this TMOD will have is a reduction of the loading on Bus 28 and the associated distribution system. The 13.8 kV system is not a system relied upon to prevent or mitigate the consequences of any accident/transient analyzed in the UFSAR. The TMOD only has the potential to affect the 13.8 kV system, which has already been evaluated (reference SS-F-98-0278) and Bus 28. The worst case scenarios are bounded by the UFSAR accident analysis. Therefore, this TMOD will not create the possibility of an accident or malfunction of a different type from those previously evaluated in the SAR.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this change does not affect any parameters upon which Technical Specifications are based; therefore, there is no reduction in the margin of safety.

Tracking No. SS-H-99-0236
Activity No. GE Procedures; SE-99-023

DESCRIPTION:

This is a validation of safety evaluation SE-99-023 that was done for Unit One. These GE procedures will be used by GE to perform the NobleChem process on Unit Two during Q2R15. The procedures direct work on their equipment only.

GE-NE-P86-00023-00-04-R0	P86-00023-NCEOI-10.00, Rev. 4
P86-00023-NCEOI-10.10, Rev. 0	P86-00023-NCEOI-10.20, Rev. 1
P86-00023-NCEOI-10.30, Rev. 1	P86-00023-NCEOI-20.00 B, Rev. 4
P86-00023-NCEOI-20.10, Rev. 1	P86-00023-NCEOI-20.20, Rev. 1
P86-00023-NCEOI-30.00, Rev. 4	P86-00023-NCEOI-30.10, Rev. 1
P86-00023-NCEOI-40.00, Rev. 4	P86-00023-NCEOI-40.01, Rev. 0
P86-00023-NCEOI-40.10, Rev. 4	P86-00023-NCEOI-40.20, Rev. 4
P86-00023-NCEOI-50.00, Rev. 3	P86-00023-NCEOI-50.10, Rev. 0

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the Noble Chem process will be applied to Unit Two during the same operating modes as those used for Unit One. The accidents reviewed in the previous evaluation are still the most limiting for this activity. The injection and sampling equipment will function the same as before. The Unit Two injection period is still 48 hours and the

quantity of noble metals is the same. The GE procedures have been revised to incorporate lessons learned from previous injections.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because operation of the GE equipment has not changed since the Unit One process. The GE equipment is not located near any safety-related equipment. Failure of the GE equipment will not have any adverse effects on equipment important to safety.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the noble metal injection process will be implemented in the same modes of operation as before. QCOP 1000-42 controls the process with respect to mode changes and ensures that all Technical Specifications are followed. The GE procedures only provide direction for work on GE equipment. All work on ComEd equipment is administered through the QCOP and other applicable station procedures. The use of these GE procedures does not reduce the margin of safety with respect to any Technical Specification.

Tracking No. SS-H-99-0240
Activity No. QAP 0300-T18, Rev. 15; QCAN 901(2)-5 D-2, Rev. 3;
QCAN 901(2)-5 B-14, Rev. 4; QCAN 901-5 D-2, Rev. 0;
QCAN 901-5 B-14, Rev. 0; QCAN 902-5 D-2, Rev. 0;
QCAN 902-5 B-14, Rev. 0; QCAN 901(2)-5 D-6, Rev. 3;
QCAN 901(2)-5 C-14, Rev. 1; QCAN 901-5 D-6, Rev. 0;
QCAN 901-5 C-14, Rev. 0; QCAN 902-5 D-6, Rev. 0;
QCAN 902-5 C-14, Rev. 0; QCAN 902-5 H-1, Rev. 0;
QCAN 901(2)-5 C-2, Rev. 3; QOA 900-5 H-1, Rev. 3;
QCAN 901-5 C-2, Rev. 0; QOA 900-5 G-1, Rev. 3;
QCAN 902-5 C-2, Rev. 0; QCOP 0700-03, Rev. 6;
QCOP 0700-04, Rev. 5; QCOP 0700-10, Rev. 0;
QCGP 1-1, Rev. 32; SE-99-074

DESCRIPTION:

The above listed procedures have been revised to reflect operator actions needed to be performed because of the installation of modification DCP #9700262. This modification has installed an Oscillation Power Range Monitor (OPRM) system on Unit 2. The OPRM system utilizes the existing Local Power Range Monitor (LPRM) signals to detect reactor core thermal hydraulic instabilities using Period Based, Amplitude Based, and Rate of Growth algorithms.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the installation of this system does not cause a change to the APRM or

RPS systems but only augments the existing APRM and LPRM systems. This system is designed to detect core instabilities and alarm thus alerting the operator of an undesirable condition. This modification does not degrade the operation of APRM equipment and the single failure tolerant design of the APRM assures that the APRM protective function is not affected by the worst case OPRM failure. The OPRM is a stand-alone system using only inputs from other systems. The probability of occurrence or the consequences of previously evaluated accidents is not changing.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the OPRM system requires functional interfacing with existing plant systems. Electrical faults in the OPRM module may affect interfacing components. However, the single failure tolerant design of the APRM assures that the APRM protective function is not affected by the worst case OPRM failure. There is no failure in the OPRM system that can prevent APRM or RPS from doing their intended function and the possibility of an accident or malfunction of a different type that previously evaluated in the SAR has not increased.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the OPRM system does not adversely affect the APRM system or LPRM system. No trips come from this system, only alarms. The operators are already trained to recognize core thermal hydraulic instability problems. This system is an added information only type of system, in which the revised procedures reflect this information.

Tracking No. SS-H-99-0241
Activity No. ACTS 0730-01, Rev. 3,
REACTOR FEEDWATER CHECK VALVE 1(2)-220-59A/B Leak Test; SE-99-070

DESCRIPTION:

This procedure has been revised to reflect a modification where the Safe Shutdown Makeup Pump (SSMP) discharge piping injection point was re-routed downstream of the Unit 2 HPCI system discharge check valve. This ensures that the SSMP system will perform its safety function if the HPCI discharge valve would spuriously open due to an Appendix R fire.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because relocating the piping injection point will not affect any accident precursor required for an Appendix R fire or any other evaluated accident. There will be no new combustibles added to the plant. The SSMP system is used to mitigate the consequences from an Appendix R fire. Relocating the injection point will remove the burden from the crews to close another valve manually. This will allow the crews to be more effective during certain Appendix R scenarios.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the SSMP system is used to mitigate the consequences of certain Appendix R fires. The performances of the SSMP and HPCI systems are not adversely affected by the relocation of the injection point. All components of other systems can safely handle the design pressures, flows, and temperatures. The piping reconfiguration will not create the possibility of a different type of malfunction or failure not previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the new piping tie-in on the HPCI system will not adversely affect HPCI system's hydraulic characteristics. The SSMP system will still be able to perform its safety function also. Re-configuring the piping will eliminate the dependency of manual operator action under certain Appendix R scenarios. Therefore, the margin of safety is not reduced,

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Tracking No. SS-H-99-0242
Activity No. QCOP 1000-29, Rev. 7,
SHUTDOWN COOLING STARTUP AND OPERATION FROM OUTSIDE THE CONTROL ROOM;
QCOP 1000-03, Rev. 10,
SHUTDOWN COOLING SUCTION HEADER FILL AND VENT;
QCGP 1-1, Rev. 32,
NORMAL UNIT STARTUP;
SE-99-032

DESCRIPTION:

The above mentioned procedures have been revised to reflect the installation of a disconnect switch within the power circuit for the shutdown cooling mode of Residual Heat Removal (RHR) system valve MO 2-1001-47.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because installation of the equipment associated with this modification cannot cause any accident or transient. The additional equipment does not affect the initiating event for any accident or transient. The probability of any failure remains the same as previously evaluated accidents. The ability of this valve to auto-close upon a Group 2 isolation remains the same so the consequences do not change because of this mod installation.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the new components will be

installed to required codes. The failure of these items will only affect the original motor operated valve, which is enveloped by the loss of the 250 VDC battery. Because of this, the possibility of an accident or malfunction of a different type than those already evaluated will not be created.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the installation of this mod will not affect the ability of this valve to auto-close if needed. Also, the valve can always be manipulated manually if needed. This will not affect the margin of safety as defined in the Technical Specifications.

Tracking No. SS-H-99-0248
Activity No. QCMMS 4100-21 Rev. 6; SE-97-110

DESCRIPTION:

Revision 6 of QCMMS 4100-21 is to delete testing requirements for the abandoned fire system that protects the abandoned ACAD system.

The safety evaluation documented the acceptability of the removal of the fire protection for the ACAD system. The ACAD system had been previously abandoned.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the fire system has been removed. Surveillance testing of this system is no longer required.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the fire system has been removed. Surveillance testing of this system is no longer required.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the fire system has no technical specification requirements.

Tracking No. SS-H-99-0250
Activity No. QCAP 0200-10, Rev. 23,
EMERGENCY OPERATING PROCEDURE (QGA) EXECUTION STANDARDS;
QCOP 5650-13, Rev. 1, U-2 EHC PUMP DISCHARGE PRESSURE ADJUSTMENT;
QOM 2-5650-01, Rev. 4, U2 EHC VALVE CHECKLIST;
QCOP 5650-10, Rev. 1, U-2 EHC SYSTEM OPERATION;
QCAN 901(2)-5 A-13, Rev. 4,
CHANNEL A/B TURB-GEN LOAD MISMATCH LOW EHC PRESS;
QCGP 2-5, Rev. 9, SCRAM REPORT DATA SHEET AND STARTUP AUTHORIZATION;
QOS 5600-01, Rev. 18, TURBINE CONTROL VALVE FAST CLOSURE SCRAM
INSTRUMENTATION CHANNEL FUNCTIONAL TEST;
SE-99-106

DESCRIPTION:

The above mentioned procedures have been changed to reflect modification DCP #9900212. This modification revised the Reactor Protection System (RPS) system by removing the Electro Hydraulic Control (EHC) low-pressure scram switches on Unit 2. These switches provide the scram signal from EHC low pressure. The effect of the modification is to reduce spurious reactor SCRAMs by removing trip functions which are not credited in any accident analysis and have the possibility to cause spurious unit trips.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the removal of the EHC low-pressure scram has no direct interface with the plant equipment that would initiate an accident. This removal has no adverse impact on existing plant equipment necessary to mitigate the consequences of an accident. UFSAR chapter 15 indicates that the EHC fluid low-pressure reactor scram function is not credited in any accident or transient analysis

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because this modification will delete the turbine EHC fluid reservoir low pressure switches and the associated RPS reactor scram function. There will be no reduction in the capability of existing plant equipment to function as required during all operational and accident modes because the RPS reactor scram function will be initiated in accordance with all applicable accident and transient analyses by the turbine EHC low fluid pressure switches located at the turbine control valves. The changes have been evaluated and will not result in the degradation or failure of any SSC. All modified and interfacing components have been analyzed and will be tested following installation as indicated in the modification approval letter to ensure that they will continue to function exactly as before. There are no other events postulated as a result of this modification which would create the possibility of an accident of a different type than

any evaluated previously in the UFSAR. As RPS is designed to be fail safe, a failure of the revised wiring will initiate the protective function. Likewise, the remaining pressure switches that will initiate the protective function will sense failure of the EHC piping. Therefore, this modification, as previously described, will not create the possibility of an accident or transient of a different type than evaluated previously in the UFSAR.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the modification will not change any plant operation parameters, or any protective system actuation setpoints other than removal of the turbine EHC Control Oil Pressure-Low scram function. This function is not credited in any accident analysis. The SCRAM function associated with the Turbine Control Valve Fast Closure is credited in the accident analyses and provides adequate protection for events involving fast turbine control valve closure including the loss of turbine EHC control oil pressure. For this reason, eliminating the turbine EHC Control Oil Pressure-Low scram function, which is redundant to other protective instrumentation, does not reduce the margin of safety.

Tracking No. SS-H-99-0253
Activity No. QCIPM 0600-01 Rev. 3; SE-98-081

DESCRIPTION:

This change incorporates into QCIPM 0600-01 Revision 3, "Reactor Feedwater Flow Loop Calibration", changes to the span of the Feed Water (FW) flow transmitters to provide proper flow signal as determined by test results.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the new Feedwater (FW) flow span calculation and uncertainty analyses were performed to ensure the FW flow input to the core thermal power meets accuracy requirements. Since the flow input will be accurately measured, the assumed starting point of the accident/transient analyses will be within the limits of this analysis. Therefore, this change will not increase the likelihood, predicted frequency or consequences of an accident or malfunction previously evaluated in the SAR.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the function and the configuration of the transmitters will remain the same during all operating modes and accident conditions. Re-spanning of the transmitters only changes the output of the transmitters for a given input and does not change the method of operation or function of the transmitters. The failure mode of the transmitter is not affected by this change and no new failure mode is introduced.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change does not affect any parameters upon which Technical Specifications are based; therefore, there is no reduction in the margin of safety.

Tracking No. SS-H-99-0254
Activity No. QOS 0005-S14 Revision 60
U2 EQUIPMENT ATTENDANTS' SURVEILLANCE/TURNOVER SHEETS; SE-96-170

DESCRIPTION:

This change includes monitoring of oil pressure and Reactor Building Closed Cooling Water (RBCCW) outlet temperature of the 2B Joy Air Compressor when in operation.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because this change is being made for monitoring purposes only. This does not result in operation of equipment not previously in use nor alter how any equipment is being operated, and therefore, does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because this change is being made for monitoring purposes only. This does not result in operation of equipment not previously in use nor alter how any equipment is being operated, and therefore, can not create the possibility of an accident or malfunction of a different type than previously evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this change does not affect any parameters upon which Technical Specifications are based.

Tracking No. SS-H-00-0002
Activity No. QCIS 0200-01 Rev. 9; QCIS-0200-02 Rev. 0; QCIS 0200-36 Rev. 0; SE-99-080

DESCRIPTION:

Previously QCIS 0200-01 rev 8, REACTOR HIGH PRESSURE SCRAM CALIBRATION AND FUNCTIONAL TEST, tested both Units pressure switches. Under DCP 9900091, the existing Barksdale Reactor Vessel High Pressure scram switches were replaced with Rosemount pressure transmitters that will utilize an analog trip unit and a Master Trip relay to interface the existing RPS

logic. This DCP was installed on Unit 2 during Q2R15. The Unit 1 DCP will be installed at a later date.

To calibrate and functionally test the new sensors, all references to Unit 2 will be removed from QCIS 0200-01 and new procedures QCIS 0200-02 & -36 created.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because the new sensors are connected to the same sensing lines and RPS circuitry as the old pressure switch. Although the technique is different, calibrating and functionally testing the new sensors fall within the same bounding isolation points.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the techniques of verifying maintenance manipulations (e.g. closing valves) and installing jumpers (RPS Test Box) to prevent half scrams are unchanged.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the same RPS instrument loops/circuitry are tested/calibrated as completely as before and on the same frequency.

Tracking No. SS-H-00-0008
Activity No. QCIS 0700-15 Rev. 0; QCIS 0700-16 Rev. 0; QCIS 0700-17 Rev. 0; SE-99-074

DESCRIPTION:

Create the following three new procedures to functionally test and calibrate the new Unit 2 Oscillation Power Range Monitor (OPRM) system during the Phase I interim tune-up period.

QCIS 0700-16 Rev 0, UNIT 2 OSCILLATION POWER RANGE MONITOR (OPRM) FUNCTIONAL TEST
QCIS 0700-15 Rev 0, OSCILLATION POWER RANGE MONITOR (OPRM) CALIBRATION AND FUNCTIONAL TEST
QCIS 0700-17 Rev 0, OSCILLATION POWER RANGE MONITOR (OPRM) RESPONSE TEST

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because this evaluation is limited to Phase I of the Unit 2 OPRM modification when it is not connected to RPS. The OPRM is functioning as a monitor only for the interim tune-up period. The system will be tuned for normal operating conditions to assure

adequate trip sensitivity while providing adequate margin to avoid inadvertent trips and spurious alarms. Since the OPRM system fine tuning does not cause any change to plant processes, and since the RPS protection function is not implemented in this modification, this change does not constitute a test or experiment not described in the SAR.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because on Unit 2, APRM's/OPRM's share power supplies in companion pairs. They are bypassed in these companion pairs ensuring only one scram circuit is effected at a time. Because the OPRM's are not connected to RPS in Phase I, no new accident or malfunctions are introduced.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because OPRM's are not required by Technical Specifications in Phase I.