

RAR-90-87

December 3, 1990

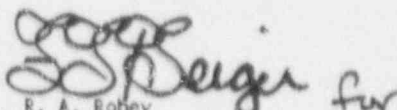
U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555

SUBJECT: Quad Cities Nuclear Station Units 1 and 2  
Changes, Tests, and Experiments Completed  
NRC Docket Nos. 50-254 and 50-255

Enclosed please find a listing of those changes, tests, and experiments completed during the month of November, 1990, for Quad-Cities Station Units 1 and 2, DPR-29 and DPR-30. A summary of the safety evaluations are being reported in compliance with 10CFR50.59 and 10CFR50.71(e).

Respectfully,

COMMONWEALTH EDISON COMPANY  
QUAD-CITIES NUCLEAR POWER STATION

  
R. A. Robey  
Technical Superintendent

RAR/LFD/klm

Enclosure

cc: A. B. Davis, Regional Administrator  
T. Taylor, Senior Resident Inspector

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Safety Evaluation #90-783  
Hoist Limits Associated With New Refuel Bridge Mast Design

Description

Change FSAR section 10.1.3 to reflect current refuel bridge mast design. The FSAR describes the hoist limits for raising fuel as reflected by the old refuel bridge mast. The new mast has different hoist limits. The old mast limited the minimum depth to 9 feet of water above active fuel. The new mast limits the depth to 8-1/2 feet for the "normal up" position and 6.75 feet for the minimum possible depth.

Evaluation

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the Final Safety Analysis Report is not increased because the function and normal operation of the refuel bridge is unchanged. The refueling interlocks operate as before. The bundle drop accident evaluation is unchanged. The total distance a bundle can drop is less than that analyzed in the FSAR.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the Final Analysis Report is not created because the function and normal operation of the refuel bridge is unchanged. No new accident or malfunction type was introduced.
3. The margin of safety, as defined in the basis for any Technical Specification is not reduced because the margin of safety is unchanged. The refueling interlocks operate as before.

Safety Evaluation #90-854  
Control Rod Movements and Control Rod Sequences

Description

Provides additional controls for moving control rods while there is no fuel in the vessel.

Evaluation

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the Final Safety Analysis Report is not increased because all fuel will be removed from the reactor and stored in the High Density Fuel Racks (HDFR) or fuel handling equipment. While the fuel is removed from the vessel, control rod movements may be performed without effecting criticality or fuel integrity. Therefore the probability of an occurrence or consequence of an accident is not increased.
2. The possibility for an accident or malfunction of a difference type than any previously evaluated in the Final Safety Analysis Report is not created because all fuel will be removed from the reactor and stored in the HDFR. The fuel will never be stored in a manner that is not consistent with analysis in the FSAR. Therefore, the possibility for an accident or malfunction different than previously evaluated is not created.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because control rod withdrawal will not effect reactivity or fuel integrity while the core is unloaded.

Safety Evaluation #90-848  
QCAP Personnel Monitoring

Description

To use TLDs instead of film badges and the use of electronic dosimetry instead of or along with ionization chambers.

Evaluation

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the Final Safety Analysis Report is not increased because it does not involve equipment used to mitigate the effects of an accident.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the Final Safety Analysis Report is not created because upgrading to state of the art dosimetry does not affect any accident precursor.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because it is not safety related nor is it mentioned in Technical Specifications.

Safety Evaluation #90-832  
Change to Section 6 of Tech Specs

Description

The Nuclear Quality Programs approval authority changed, and the head of Quality Programs and Assessments title is changed, and the procedure section is replaced with the Standard Technical Specification.

Evaluation

1. The probability of an occurrence or the consequence of an accident or malfunction of equipment important to safety as previously evaluated in the Final Safety Analysis Report is not increased because the approved authority and title changes are administrative and do not affect the occurrence probability or consequences of an accident or malfunction. Replacing the procedure section with the standard Tech Spec will not decrease the quality of procedures or reviews and thus also will not affect accidents or modifications.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the Final Safety Analysis Report is not created because the changes are basically administrative in nature and do not involve any new modes or methods of operating the plant. Thus, no new possibilities for accidents or malfunctions are created.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the standard Tech Specs provide for a more appropriate review of procedures than current Tech Specs. Thus, the quality of procedures will not be decreased and no margin to safety will be reduced by these normally administrative changes.

Safety Evaluation #90-773  
Reactor Recirculation and Reactor Water Cleanup  
System Decontamination

Description

During the Unit 1 Refuel Outage decontamination of piping associated with the Reactor vessel was performed, the Reactor Water Cleanup Piping was performed with fuel in the vessel and the vessel head removed. The decontamination chemicals did not enter the vessel during this process.

The Recirculation Pump Suction and Discharge Piping was also decontaminated. This was done with the fuel removed from the vessel. The vessel head was in place but not tensioned. Water level in the vessel was maintained below the core area of the vessel. The decontamination chemicals were flushed from the vessel prior to reloading fuel.

Evaluation

1. The probability of an occurrence or the consequence of an accident or malfunction of equipment important to safety as previously evaluated in the Updated Final Safety Analysis Report (UFSAR) is not increased as a result of this job. The original material specifications for the recirculation system, annulus, and RWCU system allowed for general corrosion. Results of corrosion testing and analysis by GE, and EPR and reviewed by System Materials Analysis (SMAD) and Chemistry Services indicate that the solvent corrosion rates are less than the original allowances.
2. The possibility for an accident or malfunction of a different type than previously evaluated in the Update Final Safety Analysis Report is not created. Potential accidents or malfunctions of equipment were reviewed and addressed as follows:

The effects of residual solvent in the system was determined to be negligible. Reactor Coolant is cleaned and returned to a conductivity and a TOC Level which is acceptable to the chemistry staff.

Gaseous releases from leaks/spills will be monitored via the normal Reactor Building Vent Monitor or by the Stand-By Gas System if the release level exceeds the specification for the Reactor Building Vent system. Liquid spills will be processed through normal radwaste lines. The diluted solvent is compatible with the station radwaste system.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced. The decontamination project will be performed in accordance with the existing technical specifications. The reactor will be maintained in the shutdown or refuel mode with all interlocks in the shutdown position.

Coolant chemistry will be monitored regularly throughout the project and upon completion of the decontamination, the coolant will be returned to a conductivity and a TOC level that is acceptable to station chemistry and radwaste.

Liquid and/or gaseous releases will be monitored as normal and will adhere to technical specification limitations.

The decontamination will be performed at  $90 \pm 5$  degrees Celsius (185-200 degrees Fahrenheit) and at approximately atmospheric pressure, both fall within the technical specification limits for maintaining primary system integrity.

Procedure Change QAP 300-2, Revision 28

Description

Procedure change to require throttle valves are given a 25 second CLOSE signal, requirements in emergencies to have procedures "on-hand", putting equipment in PTL, and to correct DVR reference on resetting thermal trips.

Evaluation

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the Final Safety Analysis Report is not increased because these changes are conservative or clarify requirements to be consistent with other procedures.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the Final Analysis Report is not created because giving guidance on when equipment can be put in PTL will not cause an accident different from the FSAR types.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because these changes are consistent with Tech Specs.



Procedure Change QOS 1300-3, Revision 7

Description

QOS 1300-3 is now incorporated into QCOS 1300-3. The major change is per the Writers Guide (format). Also steps were made more information and functional for operator use.

Evaluation

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the Final Safety Analysis Report is not increased because the RCIC system will still function as stated in the FSAR. The new QCOS verifies monthly valve operability and does not change the reliability or the function of any RCIC motor operated valve which would increase the probability or consequence of an accident previously evaluated in the FSAR.
2. The possibility for an accident or malfunction of a different type than any previous, evaluated in the Final Safety Analysis Report is not created because QCOS 1300-3 now incorporates QOS 1300-3 and did not change the configuration of any valves, instruments, or controls that could put the RCIC system in an unanalyzed conditions not previously addressed in the FSAR.
3. The margin of safety, as defined in the basis for any Technical Specification is not reduced because the Tech Spec requirements are still being satisfied by the new QCOS 1300-1 and RCIC motor operated valve operability is maintained to verify the margin of safety is not reduced.

Procedure Change QOS 1300-1, Revision 14  
Monthly RCIC Pump Operability Test

Description

QOS 1300-1 is now incorporated into QCOS 1300-1. The major change is per the Writers Guide (format). Also steps were made more information and functional for operator use.

Evaluation

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the Final Safety Analysis Report is not increased because the RCIC system will still function as stated in the FSAR. The new QCOS verifies monthly pump operability and does not change the reliability or function of any RCIC component which would increase the probability or consequence of an accident previously evaluated in the FSAR.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the Final Safety Analysis Report is not created because QCOS 1300-1 now incorporates QOS 1300-1 and did not change the configuration of any valves, instruments, or controls that could put the RCIC system in an unanalyzed condition not previously addressed in the FSAR.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the Tech Spec requirements are still being satisfied by the new QCOS 1300-1 and RCIC pump operability is maintained to verify the margin of safety is not reduced.

Procedure Change QFP 100-1, Revision 24  
Master Refueling Procedure

Description

This revision adds additional guidance and controls to ensure safe refueling operation. Requirements are added regarding the use of the SRM shorting links, the blockage of control rod motion, and the use of the Fuel Handling Verifier for second verification for all fuel moves. Guidance and control on raising the main hoist above the "normal up" position is added. A prerequisite is added to verify proper indication of the grapple selsyns.

Evaluation

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the Final Safety Analysis Report is not increased because the function and normal operation of the refuel bridge is unchanged. Additional procedural controls are added to help ensure safe operation, proper communication, and proper transferring of fuel. The refueling interlocks operate as before and the bundle drop accident evaluation is unchanged. The total distance that a bundle can drop is less than that analyzed in the FSAR
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the Final Safety Analysis Report is not created because the function and normal operation of the refuel bridge is unchanged. No new accident or malfunction type is introduced.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the margin of safety is unchanged. The refueling interlocks operate as before.

Safety Evaluation #90-819  
1B Core Spray Motor Inspection

Description

Installation of a temporary steel plate on a Secondary Containment hatch.

Evaluation

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the Final Safety Analysis Report is not increased because the temporary plate has been analyzed by engineering to ensure that it meets secondary containment requirements. Reference SESR #4-0345.
2. The possibility of an accident or malfunction of a different type than any previously evaluated in the Final Safety Analysis Report is not created because the plate provides for secondary containment. No other system is affected.
3. The margin of safety, as defined in the basis for any Technical Specifications, is not reduced because secondary containment will be maintained. There will be no increased risk of a radioactive release to the environment.