Braidwood Nuclear Power Station

10 CFR 50.59 Summary Report
6/19/94 through 6/18/96

NRC Docket Nos. 50-456 and 50-457

License Nos. NPF-72 and NPF-77

I. FACILITY CHANGES

A. MODIFICATIONS

1. M20-1-88-027
2. M20-1-88-051, -056, -069/M20-2-88-052, -057, -072
   M20-1-89-014, -026/M20-2-89-023
3. M20-2-88-024-A
4. M20-2-88-088
5. M20-0-90-001, -006, -008/M20-0-88-025
6. M20-1-90-002
7. M20-1/2-93-001
8. M20-1/2-93-002
9. M20-1/2-93-005
10. M20-0-94-004
11. M20-0-94-006

B. EXEMPT CHANGES

1. E20-0-93-323
2. E20-1(2)-93-348
3. E20-0-94-208
4. E20-0-94-221
5. E20-0-94-229
6. E20-0-94-235
7. E20-0-94-254
8. E20-1/2-94-251
9. E20-0-95-217-002
10. E20-0-95-220-002
11. E20-1-95-209-002
12. E20-1-95-209-004
13. E20-1-95-209-005
14. E20-1-95-209-009
15. E20-1/2-95-234
16. E20-1/2-95-245
17. E20-1-95-246
18. E20-2-95-209-002
19. E20-2-95-209-003
20. E20-2-95-215
21. E20-1-96-254

C. MINOR PLANT CHANGES

1. P20-0-92-619
2. P20-1(2)-92-601/E20-0-93-286
3. P20-1-92-618
4. P20-1-93-600

D. SETPOINT/SCALING CHANGES

1. SSCR 92-016, -017, -018, -019, -020
2. SSCR 93-014

E. TEMPORARY ALTERATIONS

1. 95-1-010 & 95-2-014

II. PROCEDURAL UFSAR CHANGES

A. None.

III. TESTS/EXPERIMENTS

A. None.

IV. OTHER UFSAR CHANGES

A. UFSAR DRPs (UFSAR Draft Revision Packages)

1. UFSAR DRP 6-008
2. UFSAR DRP 6-013
3. UFSAR DRP 6-014
4. UFSAR DRP 6-015
5. UFSAR DRP 6-036
6. UFSAR DRP 6-038
7. UFSAR DRP 6-041
8. UFSAR DRP 6-042
9. UFSAR DRP 6-046
10. UFSAR DRP 6-047
11. UFSAR DRP 6-050
12. UFSAR DRP 6-052
13. UFSAR DRP 6-054
14. UFSAR DRP 6-059
15. UFSAR DRP 6-060
16. UFSAR DRP 6-061
17. UFSAR DRP 6-064
18. UFSAR DRP 6-065
19. UFSAR DRP 6-067
20. UFSAR DRP 6-069
21. UFSAR DRP 6-070
22. UFSAR DRP 6-083
23. UFSAR DRP 6-084
24. UFSAR DRP 6-088
25. UFSAR DRP 6-090
26. UFSAR DRP 6-092
27. UFSAR DRP 6-093
28. UFSAR DRP 6-099

B. Fire Protection Report FDRPs (Fire Protection Draft Revision Packages)

1. FPR FDRP 16-030
2. FPR FDRP 17-009
3. FPR FDRP 17-012
4. FPR FDRP 17-031
5. FPR FDRP 17-032
6. FPR FDRP 17-037

MODIFICATION

M20-1-88-027

DESCRIPTION:

Delete check valves 1FW078A, B, C, D and replace with piping spool pieces. Also modify FW isolation logic to delete the requirement for low T_{AVE} interlock with reactor trip to initiate FW isolation (i.e. all reactor trips will result in FW isolation).

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased. The ability of the Main Feedwater (FW) system to perform its design function as described in section 10.4.7 of the UFSAR is not impaired by deleting the controlled closure check valves from the FW bypass lines. The deletion of the low T_{AVE} interlock concurrent with a reactor trip signal from the FW isolation initiation is consistent with the design intent of protecting the Reactor Coolant (RC) system from excessive cooldown following a reactor trip.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created. The FW and AF systems will still perform their intended safety functions as described within UFSAR sections 10.4.7 and 10.4.9. The use of the main FW isolation valve (FW009) and the FW bypass line isolation valve (FW039) will prevent backflow of Auxiliary Feedwater (AF) to the steam generator preheater section. Therefore, the performance of the AF system is not impaired and the formation of a bubble collapsed water hammer in the steam generator preheater section is precluded. The risk of rapid closure induced water hammer in the bypass line is reduced since the FW bypass isolation valve closes slower than the controlled closure check valve which is being deleted. Sufficient redundancy exists in the instrumentation and controls associated with FW isolation such that a single active failure will not result in an unanalyzed accident.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced. The AF system will still be capable of removing decay heat and reducing the RC temperature to less than 350°F from normal operating conditions (basis for Tech. Spec. 3/4.7.1.2). The FW isolation valves will continue to function as designed to meet the intent of the basis for Tech. Spec. 3/4.6.3. The Reactor Trip System and Engineered Safety Features Actuation System Instrumentation will continue to function as designed to meet the intent of the basis for Technical Specifications 3/4.3.1 and 3/4.3.2. The margin of safety as defined in the basis for Technical Specifications 3/4.7.1.2, 3/4.6.3, 3/4.3.1, and 3/4.3.2 is not reduced by this modification.

MODIFICATIONS

M20-1-88-051, -056, -069
M20-2-88-052, -057, -072
M20-1-89-014, -026
M20-2-89-023

DESCRIPTION:

A change to the Fire Protection Report was required to incorporate the cumulative effects of fire loading from past modifications in Fire Zones 1.2-1, 1.3-1, 3.2A-2, 3.2B-1, 3.2B-2, 3.2C-1, 3.2C-2, 3.2D-1, 3.2D-2, 3.2E-1, 3.2E-2, 3.3A-2, 3.3B-1, 3.3C-1, 3.3C-2, 3.3D-1, 3.3D-2, 3.4A-1, 3.4A-2, 8.2-1, 8.2-2, 8.3-1, 8.3-2, 8.5-1, 8.5-2, 8.6-0, 11.2-0, 11.3-0, 11.4-0, 11.5-0, 11.5A-1, 11.6-0 and 11.6-1. The increase in fire loads was mainly due to small increases of cable insulation, fuel oil, and diesel oil. The changes in these fire zones were negligible (i.e., less than 1000 Btu/ft^2).

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because these changes have no effect on equipment important to safety and the consequences of an accident. The insignificant increase in fire loading will not increase the probability of a design basis fire.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the existing fire protection features in the affected zones continue to provide adequate fire protection and these changes do not adversely affected the ability to achieve and maintain safe shutdown in the event of a fire in the affected areas.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no systems or components addressed in Technical Specifications are affected.

MODIFICATION

M20-2-88-024-A

DESCRIPTION:

This modification provides status lights on the Main Control Board 2PM09J to indicate battery in use, trouble and low voltage conditions for Fire Detection Control Cabinets 2PA39J and 2PA49J backup power supplies, as well as annunciation of the corresponding fire system trouble alarm at Main Control Board 0PM01J and initiation of an SER message for each condition. In addition, install a timing relay to delay annunciation of a battery in use condition for 30 seconds to prevent nuisance alarms.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased. This modification completes a design change to improve the reliability and operation of the fire protection system, by providing Main Control Room indications of fire detection control cabinets battery charger status only. The operation of associated fire detection and suppression systems is not impacted by this partial modification.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created. The ability of the fire protection system to perform its intended functions, as defined in the Fire Protection Report, is not affected by this modification. This modification completes the installation of a design change implemented to enhance operation of the Cable Spread Room fire suppression systems. This partial modification utilizes existing contacts in associated circuitry and requires installation of an additional time delay relay and indicating lights for status annunciation only.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced. This non safety related modification does not impact fire protection system function, and the plant fire protection system is not specifically addressed by the Technical Specifications. Accordingly, no Technical Specification basis is affected and the margin of safety is unchanged.

MODIFICATION

M20-2-88-088

DESCRIPTION

The primary purpose of this modification was to enlarge the Unit 2 Remote Shutdown Room by removing a security wall and door, relocate all components mounted on this wall, relocate the communications equipment (phones and radio), add lighting fixtures and dimmer switches, and convert the double doors located north at column 26 to security doors. This is a result of Human Factors Engineering identifying the remote shutdown area as too small. This modification also relocated and rewired three existing lighting fixtures in the Remote Shutdown Room to Essential AC lighting circuits to ensure adequate lighting during a loss of offsite power.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the modification improves the layout of the Unit 2 Remote Shutdown Room in order to improve its usefulness. It does not affect any plant equipment which is required to respond to a design basis event or to keep the plant in a safe shutdown condition.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the change affects only the layout of the Unit 2 Remote Shutdown Room. All changes performed in this modification have been evaluated and found to have no detrimental effect on other plant systems.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the equipment required for safe shutdown is not affected by this modification. This modification affects only the layout of the Remote Shutdown Room.

MODIFICATIONS

M20-0-90-001, -006 AND -008
M20-0-88-025

DESCRIPTION:

A change to the Fire Protection Report was required to incorporate the cumulative effects of fire loading from past modifications in Fire Zone 18.28-0, waste water treatment building. These modifications involved replacing sump pumps, submersible pump, feed pumps, larger discharge piping or installing a parallel clean water discharge flow path continuing cartridge filter with isolation valves and pressure gauges for the waste water treatment system. This revision was to update the small addition of fire loading in this fire zone as a result of these modification activities.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because these modifications do not impact any safety related systems or safety related structures, and are located in a nonseismic area (wastewater treatment building).

   These modifications do not affect any accident described in UFSAR Chapter 15.

   The insignificant increase in fire loading will not increase the probability of a design basis fire.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because there is no safe shutdown or safety related equipment in the area, and these changes will not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire in the affected area.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there are no interactions created by these modifications that prevent any safety systems from performing their intended functions.

MODIFICATION

M20-1-90-002

DESCRIPTION:

This modification provides a flow path from the tendon tunnel sumps discharge to the regeneration waste drain tank inlet header. During normal conditions, the tendon tunnel discharge will be routed to the fire and oil sump. Upon anticipation or detection of contamination in the fire and oil sump, due to contaminated tendon tunnel sump discharge, local manual operator action at the fire and oil sump will route the discharge of the tendon tunnel sumps to the regeneration waste drain tank. This will allow processing of the contaminated waste without processing all of the additional non contaminated water in the wastewater treatment system.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased. This modification does not impact any safety related systems or structures, and is located in a non-seismic area.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created. This modification does not impact any safety related systems or structures, and is located in a non-seismic area. No new failure effects have been determined to exist as a result of this modification.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced. This modification does not impact any safety related systems or structures, and is located in a non-seismic area. No new failure mode is created by this modification. There are no new interactions created by this modification that prevents any safety system from performing their intended functions.

MODIFICATION

M20-1/2-93-001

DESCRIPTION:

This modification replaced the previous CETC cables, connectors and reference junctions, which were EQ qualified for 10.75 years, with components supplied by ABB-CE, which were EQ qualified for 40 years.

The previous cables/connectors had an EQ life of 10.75 years. Therefore, these components were at the end of their EQ life and required replacement.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because:

   (a) The ICC instrument package (including CETCs) is utilized to monitor the approach to and recovery from an ICC condition resulting from an accident/event such as a LOCA, and is not an accident initiator. Therefore, the probability of initiating an event leading to ICC, such as a LOCA, is not increased by these changes.

   (b) The overall intent of ICC detection is understood to be the detection of the potential for fission product release from the reactor fuel in the event of an accident leading to the ICC condition. The consequences of the initiating accident in terms of predicted dose release are dependent upon the amount of assumed fuel failure and mass/energy release. Since this modification did not affect these parameters, there is no increase in the radiological consequences of the initiating accident.

   (c) The CETC instrument system consists of two safety grade channels from sensors through signal processing equipment. Inputs from the ICC detection system to the computer which drives the primary display are isolated by isolation devices qualified to Class 1E criteria. The cabling, connectors, and associated hardware introduced by this modification had been qualified for use as replacements for the previous components, and electrical and mechanical separation criteria have been maintained. Therefore, the probability of a malfunction has not been increased.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the cabling, connectors and integrated reference junctions (IRJs) introduced by this modification are functionally the same as the previous components, only the configuration of the components was changed. The new components had been qualified as replacements for the previous components through testing and analysis and reduced the total number of components within the CETC instrumentation loops of the IT system.

   The CETCs are part of the Inadequate Core Cooling instrument package, and are designated Postaccident Monitoring instruments. Therefore, the CETCs are not considered an accident initiator. This modification did not alter the function or failure modes of the CETCs as described in the UFSAR. Therefore, the UFSAR analyses remain bounding.

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

MODIFICATION

M20-1/2-93-002

DESCRIPTION:

Modification M20-1/2-93-002 replaces the Resistance Temperature Detector (RTD) bypass manifold piping on all four reactor coolant loops, which utilize direct immersion single-element RTDs, with thermowell-mounted dual element fast response RTDs. The existing hot-leg scoops will be modified to accept new thermowells, which will be positioned to provide an average temperature reading for each scoop. The existing cold-leg RTD bypass penetration nozzle will also be modified to accept the replacement RTD. The replacement RTDs will be placed in each of three existing hot-leg scoops and in the cold-leg penetration of each loop. One element of each RTD will be active; the other will serve as an installed spare. The three hot-leg temperature signals will be electronically averaged in the reactor protection system (RPS) to produce a representative hot-leg temperature.

The elimination of the RTD bypass piping/components and replacement with the thermowell-mounted RTDs will eliminate a significant radiation source as well as a source of RCS leakage. Also, a faulty RTD may be replaced without breaching the RCS pressure boundary.

SAFETY EVALUATION SUMMARY:

1. The probability of the occurrence of an accident previously evaluated in the UFSAR is not increased. Because the hot-leg RTDs are mounted directly in the scoops, temperature measurement inaccuracies caused by imbalances in the flow scoop sample flow are eliminated. With the thermowells welded into the existing RCS hot & cold leg nozzles, and the elimination of the bypass piping, the number of pressure boundary welds will be significantly reduced, resulting in a reduced probability of a small break LOCA. Also, the probability of an accident is not increased because the total response time associated with the OTDT and OPDT trip functions will remain less than or equal to the 8-second response time previously modeled in the safety analysis. The consequences of an applicable UFSAR Chapter 15 accident are not increased due to this modification because the distribution of time responses for OTDT and OPDT does not result in a minimum DNBR lower than the safety analysis limit, does not result in a fuel centerline melt, nor do superheated steam releases change from those currently existing. The probability of a malfunction of equipment important to safety is not increased because of the compatibility of the added 7300 electronic hardware to the original equipment. The capability of the RPS to initiate a reactor trip is not affected. Since the thermowells are passive components, there is no failure mode associated with the thermowell. The consequences of a malfunction of equipment important to safety does not increase because an RTD failure does not result in a release of radioactive materials.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created by implementation of the proposed modification because the failure of a thermowell at the RCS pressure boundary would potentially result in an accident that has been enveloped by current design basis accident analyses.

3. The proposed modification does not involve a significant reduction in margin of safety. The UFSAR events which rely on OTDT and OPDT trips have been evaluated. The evaluation concludes that the safety analyses acceptance criteria continue to be met, since the total response time is consistent with the safety analyses. The OTDT and OPDT trips function in the same manner to terminate DNB-related transients. The reliability of the reactor protection is unaffected by this change.

MODIFICATION

M20-1/2-93-005

DESCRIPTION:

The purpose of this Modification was to remove the Main Control Room Breathing Air (EA) System with Self Contained Breathing Apparatus (SCBA).

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the Modification is not related to the operation of any plant component. There are no accident scenarios analyzed in the UFSAR which are caused by the EA System. The EA System does not have any impact on equipment required to mitigate the consequences of any accident. The added SCBAs and backup air bottles do not in any way increase the probability of a malfunction of equipment important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because there are no accident scenarios analyzed in the UFSAR which are caused by the EA System. The added SCBAs and backup air bottles do not adversely affect the functions of any SSC's.

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

MODIFICATION

M20-0-94-004

DESCRIPTION:

This modification replaced Borg-Warner actuators with Hydramotors for bubble-tight dampers 0VC281Y and, 0VC312Y for main control room ventilation (VC) Train A and 0VC016Y and 0VC313Y for VC Train B.

Also, installation of passive mechanical blocks was made permanent on the VC purge dampers, 0VC018Y, 0VC020Y for Train A, and 0VC002Y and, 0VC004Y for Train B. As a result, a purge is no longer initiated solely by handswitches 0HS-VC021, 0HS-VC022 at Main Control Board 0PM02J for VC Train A and B, respectively. Additional switches are available at the Remote Shutdown Panel 0HS-VC118 for Train A on panel 1PL04J and 0HS-VC122 for Train B on panel 1PL05J. The main control room envelope can still be purged by removing the mechanical blocks from the desired train purge dampers, manually opening the dampers, and by positioning the appropriate handswitches to the purge position to makeup the needed interlocks. Purging will put both VC trains in a LCOAR condition; this requires both units to be shutdown. If an event is sufficiently severe to require a VC purge, this particular event would likely require both units to be shutdown. This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the fail-safe operation of the affected VC dampers is improved and will continue to support the VC system operability following an accident. The mounting arrangements for the new damper/actuator assemblies have been qualified for seismic conditions. The consequence of a LOCA on control room operators' radiological doses is not increased by this modification.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this modification does not adversely affect the VC system or VC bubble-tight dampers operation.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the parameters used to establish Technical Specification limits are unchanged. And the capability of the VC system to maintain the system parameters addressed in the Technical Specifications is not altered.

MODIFICATION

M20-0-94-006

DESCRIPTION:

Modification M20-0-94-006 adds a bypass line, including a manual isolation valve, to the "A" Boric Acid Evaporator Package. The line connects the inlet of the Recycle Evaporator to the outlet of the Distillate Cooler. The modification permits the routing of the contents of the Recycle Holdup Tanks (RHTs) to the Recycle Monitor Tanks (RMTs) via the Recycle Evaporator Condensate Demineralizer. The radwaste water can be cleaned further by recycling between the RMTs through the Recycle Condensate Demineralizer. This process is accomplished independently of the normal liquid radwaste processing via the vendor demineralizer package, thus allowing each waste stream to be processed more efficiently.

The resulting benefit of M20-0-94-006 is the reduction in Curie discharges and the elimination of potentially compromising unit availability due to a lack of liquid radwaste storage volume in the RHTs.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR, is not increased because the modification does not degrade the structural integrity of the RHTs, the Spent Resin Tank or the related piping. The addition of the bypass line does not increase the probability of a complete release of radionuclide inventory from these tanks. The UFSAR accident analysis does not take credit for the operation of any system or operator action to mitigate the consequences of this accident. The modification does not change the assumptions or conditions evaluated in this accident. A potential rupture of the RMTs due to operator error is bounded by the analysis performed for this accident. Thus the consequences (off-site dose) of a radioactive liquid waste system leak or failure are not increased. Since no physical changes are being made to the Spent Resin Storage Tanks or the RHTs, the probability of a malfunction of these tanks is not increased.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the postulated failure of the RMTs is bounded by the UFSAR analysis in Section 15.7.2, "Radioactive liquid waste system leak or failure (Atmospheric release)." However, procedures will be in place to prevent such an operator error-related event.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the structural integrity of the RHTs and the Spent Resin Tanks will not be affected. Because the Curie discharge will be reduced by this modification, the margin of safety is increased.

EXEMPT CHANGE

E20-0-93-323

DESCRIPTION:

This exempt change provided the necessary station LAN communication equipment, associated cabling and 120-Vac power receptacles for extending the station LAN out to the main access facility or gatehouse (MAF) and the receiving warehouse. The station LAN was designed to provide relevant plant information to plant personnel. The specific scope included: 1) installing new LAN communication hubs in the MAF and receiving warehouse; 2) installing new fiber optic cables between the service building second floor phone room LAN communication hub and the new MAF and receiving warehouse LAN communication hubs; 3) installing new computer communication drops at various locations throughout the MAF and receiving warehouse utilizing 10base-t LAN communication cables connected to the new LAN hubs; 4) installing new 120-Vac power receptacles in MAF to support the additional LAN computers; and 5) installing one new 25-pair telephone cable between the MAF phone cabinet and the receiving warehouse phone cabinet to increase the voice communication channels available at the receiving warehouse. This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because all the equipment associated with this change is not safety related and located in a nonseismic Category II area and is physically separated and electrically isolated from any safety related or important to safety equipment. Therefore, this change does not affect the operation or influence a malfunction of any equipment important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the electrical loading is adequate and the Station LAN provides no control or protection functions, this change does not impact the operation of the plant or the function of any equipment important to safety. The additional load on the non-ESF buses does not impact the operation of the onsite ac power system in a manner not previously considered. Therefore, no new accidents are created as a result of this change.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the Technical Specifications do not address operation of the non-ESF onsite ac power system.

EXEMPT CHANGE

E20-1(2)-93-348

DESCRIPTION:

This exempt change involved the replacement of the previous ILRT cables 1 (2) PC018 and 1 (2) PC019. These cables were replaced with 16C /8TWPR, #16 to accommodate present use. The previously installed cable was 2C /1TWPR, #16. Conduit C1A5276 was also removed and replaced with flexible conduit. Conduit C2A5261 was replaced with a 3-inch conduit. This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because this exempt change does not involve or interface with any safety related systems, and no system parameters necessary to mitigate accidents have been altered.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this exempt change is a replacement and all additional loads are within the design of the supports. No accidents not already evaluated by the UFSAR have been created.

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

EXEMPT CHANGE

E20-0-94-208

DESCRIPTION:

This exempt change added baseboard heaters in the Radiation Protection offices adjacent to the Unit 2 Turbine Building 401-foot elevation to enhance the effectiveness of the existing HVAC equipment during periods of extreme cold temperatures. In addition, a regular lighting cabinet (RLC) and a 480-208/120-Vac transformer were installed to provide the necessary power for the added heaters. This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because electrical load associated with this change does not affect the normal or emergency operation of the onsite ac power system, and all the equipment associated with this change is not safety related and located in a nonseismic Category II area physically separated and electrically isolated from any safety related or important to safety equipment.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not impact the operation of the plant or the function of any equipment important to safety, and the additional electrical load on the non-ESF bus does not impact the operation of the onsite ac power system in a manner not previously considered.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the local lighting and rad protection office HVAC systems and the onsite non-ESF ac power system are not addressed in the Technical Specifications. And no systems or components addressed in the Technical Specifications are affected by this exempt change.

EXEMPT CHANGE

E20-0-94-221

DESCRIPTION:

This exempt change provided additional electrical service to the lunch room. The specific change scope included: a) added new 120-V and 208-V convenience receptacles for the food service equipment, b) permanently installed the SO cord arrangement, c) upgraded the 15-kVA 480-208/120-V transformer feeding RLC 5B to 30 kVA, d) upgraded the 15-kVA, 480-208/120-V transformer feeding RLC 5C to 45 kVA, and e) repowered the transformer feeding RLC 5C with a direct feed from MCC 034W1. This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the additional electrical load associated with this change does not affect the normal or emergency operation of the onsite ac power system. All the equipment associated with this change is not safety related and located in a nonseismic Category II area and is physically separated and electrically isolated from any safety related equipment or equipment important to safety. Therefore, this change does not affect any equipment important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not impact the operation of the plant or the function of any equipment important to safety.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no systems or components addressed in Technical Specifications are affected.

EXEMPT CHANGE

E20-0-94-229

DESCRIPTION:

This exempt change provided the 120-Vac Power distribution equipment for the relocated Station LAN Servers and their supporting peripheral equipment in the TSC computer room, 435-foot elevation. The station LAN equipment was located in the Service Building and was relocated to the TSC computer room. The specific scope included installing 15-amp, 120-Vac receptacles and associated cables and rewiring the existing 120- and 240-Vac circuits at TSC distribution panel 0CX24J. The new 120-Vac receptacles were installed in TSC computer room raised floor to accommodate furniture arrangements. This new distribution equipment was fed from the TSC/security uninterruptible power supply (UPS). This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased. The reduced electrical load associated with this change does not affect the normal or emergency operation of the onsite ac power system, including the TSC/Security UPS. All the equipment associated with this change is not safety related and located in a nonseismic Category II area and is physically separated and electrically isolated from any safety related or important to safety equipment. Therefore, this change does not affect any equipment important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not impact the operation of the plant or the function of any equipment important to safety. The additional load on the non-ESF TSC/Security UPS does not impact the operation of the onsite ac power system in a manner not previously considered. Therefore, no new accidents are created as a result of this change.

3. The margin of safety, as defined in the basis of any Technical Specification, is not reduced because the non-ESF onsite ac power system is not addressed by the Technical Specification. Therefore, this change does not affect the Technical Specification or its bases.

EXEMPT CHANGE

E20-0-94-235

DESCRIPTION:

The purpose of this Exempt Change was to improve flow through the Steam Generator Blowdown (SD) demineralizers by replacing the existing underdrain laterals with ones with a larger size opening. The new laterals are sized to allow for the desired demineralizer flowrate and still prevent the passage of resin beads. In addition, the Regeneration and Interface Collector Header piping systems were removed from the vessels. These piping systems will not be used, and their removal enables easier access to the underdrain laterals for future maintenance work.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the Exempt Change does not change the function of the SD System or the demineralizers. Replacement of the underdrain laterals will increase demineralizer flowrates, which will improve secondary side chemistry and Steam Generator operation. The SD system may be used to cooldown the affected Steam Generator after a Steam Generator Tube Rupture Accident. Replacement of the underdrain laterals will not adversely affect the system's ability to perform this function. Removal of the Regeneration and Interface Collector Header piping systems will have no impact on demineralizer or plant operation since these systems are not used.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the replacement underdrain laterals are supplied by the vessel Vendor and are consistent with original design. The differences between the existing and replacement underdrain laterals are insignificant with respect to the vessel design. Neither the new laterals nor the removal of the Regeneration and Interface Collector Header piping systems will adversely affect the seismic mounting of the vessel.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the function of the SD System or the demineralizers is not changed by this Exempt Change. No Technical Specifications are affected.

EXEMPT CHANGE

E20-0-94-254

DESCRIPTION:

The primary purpose of this design change was to provide the installation details for a vehicle barrier system at the Braidwood Nuclear Station. This design change was required to comply with the provisions of 10CFR73 and NUREG/CR-6190 Volume I, Rev.1 and Volume II, Rev.1 for protection against malevolent use of vehicles. Jersey barriers were installed around the periphery of an existing security fence for the main plant and three sides of the Lake Screen House.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the section 2.4.2.3 (Effects of Local Intense Precipitation) of the UFSAR is not increased. The flooding due to the local PMP(Probable Maximum Precipitation) could result in a short term maximum water surface elevation of 601.77 feet in the immediate plant area due to the installation of the jersey barriers. This revised maximum flood level remains below the reinforced concrete curb elevation provided at 602.00 feet. The addition of the vehicle barrier system provides the required increased protection against malevolent use of vehicles but does not impact any equipment important to safety directly or indirectly.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this design change does not adversely impact UFSAR accident related SSCs. The addition of the vehicle barrier system does not introduce any adverse interactions between any SSCs.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the addition of the vehicle barrier system does not affect any parameters upon which Technical Specification are based. Therefore there is no reduction in the margin of safety.

EXEMPT CHANGE

E20-1/2-94-251

DESCRIPTION:

The purpose of this Exempt Change was to install permanent Westinghouse in-mast sipping hardware to the refueling machine to enable the machine to detect failed fuel assemblies. The scope of the Exempt Change included the installation of permanent mechanical components to the mast. The in-mast sipping system will permit the injection of air into the bottom of the refueling machine mast, the collection of the air at the top of the mast, and passage of the air through a radiation monitoring system. This system will provide a more accurate method for detecting fuel leakers.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the Exempt Change does not change the function of the refueling machine. The in-mast sipping components are structurally adequate to withstand deadweight and seismic loads. The probability of a fuel handling accident is not increased. In addition, the tubing and tube supports can withstand the hydraulic drag forces resulting from the motion of the mast through the refueling canal water. The ability of the refueling machine to perform fuel handling operations is not changed.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the in-mast sipping components have been qualified to withstand required loads. Any mast modification hardware that will be submerged in the refueling cavity water during operation will be constructed of 300 series stainless steel or another reactor cavity approved material. Though the actual in-mast sipping testing process is outside the scope of this Exempt Change, Engineering evaluation determined that there will be no boiling in the fuel assembly as it is suspended in the enclosed refueling mast during the test. Fuel assembly integrity will be maintained during and after the in-mast sipping process. In addition, the in-mast sipping system does not present a criticality safety issue

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this function of the refueling machine is not changed by this Exempt Change. The scope of this Exempt Change has no impact on Technical Specification 3/4.9.6, which provides the operability and capacity and load limit requirements for the refueling machine.

EXEMPT CHANGE

E20-0-95-217-002

DESCRIPTION:

The purpose of this exempt change is to provide a safer and more efficient method of debris disposal at the Lake Screen House. Floating debris that becomes captured against the grating protecting the water intake bay areas of the Lake Screen House is removed from the grating by a traversing rake mechanism and then deposited in a wheel mounted trash cart. The current process requires a portable crane to lift the trash cart and empty its contents into a dumpster. This exempt change installs a hydraulic powered lift table used to rinse and empty the trash cart, so that a portable crane will no longer be required. As part of this exempt change, two steel channel wheel guides are added to allow the trash cart to be pulled into position over the lift table. These wheel guides are welded to the existing channels shown on UFSAR Figure 3.8-78.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the modification does not affect the function the Circulating Water System or any other system important to safety. The trash cart is not used to mitigate the consequences of any accident, and no equipment important to safety is affected by this modification.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the exempt change will not affect operations, and it will not introduce any new failure modes.

3. The margin of safety, as defined in the basis for any Technical Specification, will not be reduced because there are no Technical Specification Requirements associated with the operation of the trash cart.

EXEMPT CHANGE

E20-0-95-220-002

DESCRIPTION:

This exempt change replaced the previous four-ply, built-up Turbine Building roofing system with a single-ply, fully adhered, "Sarnafil" roofing system. The previous roof covering was about 17 years old and had deteriorated. The single ply roofing system was installed over the rigid insulation to stop the leaks and should provide a practically maintenance-free roof for 15 years.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or a malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the single ply roofing system was designed to meet the wind velocities required per the UFSAR, and it also complies in all respects with the applicable requirements of the Underwriters' Laboratories Inc. (UL) listing for a "Class A" rating. The damaged precast concrete panels were replaced to meet the applicable specification and code requirements.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the replacement of roofing does not introduce any adverse interactions between any SSCs. Therefore, there is no possibility of an accident or malfunction of a type different from those evaluated in UFSAR.

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

EXEMPT CHANGE

E20-1-95-209-002

DESCRIPTION:

This exempt change rerouted the safe shutdown power cables (1DC001 and 1DC003) for the 125-V ESF Battery 111 out of Fire Zone 3.2A-1. These safe shutdown cables were previously protected with a 1-hour rated fire barrier in Fire Zone 3.2A-1. Rerouting these cables out of the zone eliminated the need for the 1-hour fire barrier.

This change also included the following activities: 1) relocated a light fixture inside the battery room; 2) relocated a gang box on the battery room wall; and 3) installed a portion of conduit routing associated with Exempt Change E20-1-95-209-005 which utilizes shared supports and core holes.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because:

   a. This change does not impact the ability of the dc system, including Bus 111 to perform its required function; supplying control power to various safety related equipment/systems.

   b. This change does not influence any of the external events, i.e., tornado, responsible for loss on nonemergency ac power.

   c. The change does not affect the initial conditions assumed in the accident analysis.

   d. The electrical raceways are seismically supported in the Category I areas and the appropriate electrical and physical separation is maintained throughout the routing.

   Therefore, this change does not affect the operation or influence a malfunction of any equipment important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not impact the operation or performance of any plant SSC important to safety, including Bus 111. Adequate design margin exists for the feed cable size and in the weight loading on the Category I structures. Therefore, no new accidents are created by this change.

3. Braidwood Technical Specification 3/4.8.2 has been reviewed and is applicable to the specific equipment associated with this change. It is concluded that no parameters used to establish the Technical Specification limits are changed or affected. Therefore, the margin of safety, as defined in the basis for any Technical Specifications is not reduced.

EXEMPT CHANGE

E20-1-95-209-004

DESCRIPTION:

This exempt change added a portion of the electrical raceway necessary to support the re-routing of safe shutdown power cables 1CC001 and 1SX001 for the 1A CC and 1A SX pumps (1CC01PA and 1SX01PA). This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the passive electrical raceway installed under this change is seismically supported and physically and electrically separated from existing plant conduits, piping and equipment such that it does not affect the failure modes or mechanism of any existing plant SSCs.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the electrical raceway installed under this change was designed in accordance with the appropriate seismic and electrical design criteria and it does not impact the operation of any plant SSCs important to safety. Therefore, no new accidents are created as a result of this change.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no systems or components addressed in Technical Specifications are affected.

EXEMPT CHANGE

E20-1-95-209-005

DESCRIPTION:

This exempt change addressed the following issues associated with the TSI Resolution Project: 1) rerouted safe shutdown control cables (1DG157, 1DG175, 1DG222, and 1DG223) for the 1A DG (1DG01KA) out of Fire Zones 3.2A-1 and 3.1-1; 2) rerouted safe shutdown control cable 1DO005 for 1DO01PC out of Fire Zone 3.1-1; and 3) repowered three components (governor, 86G relay and 20SD valve) for the 1A and 1B DG (1DG01KA and KB) from normal supply #2 to normal supply #1.

These safe shutdown cables were rerouted to eliminate the requirement to protect them with 1-hour rated fire barriers in Fire Zones 3.2A-1 and/or 3.1-1. Repowering the DG control components eliminated the need to either reroute or protect certain DG control cables. This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to the safety, as previously evaluated in the UFSAR is not increased because:

   a. This change does not impact the ability of the ESF auxiliary ac power system to supply power to plant auxiliaries during an emergency nor does it change the loading on the non-ESF or the ESF auxiliary ac and dc power systems.

   b. This change does not influence any of the external events; i.e., tornado, responsible for a loss of nonemergency ac power event.

   c. These changes do not affect the initial conditions assumed in the accident analysis.

   d. The electrical raceways are seismically supported in the Category I areas and the appropriate electrical and physical separation is maintained through out the entire routing.

   Therefore, this change does not affect the operation or influence a malfunction of any equipment important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not impact the operation or performance of any plant SSC import to safety, including the 1A and 1B DG. The conduits and cables installed under this change were designed and installed in accordance with the appropriate seismic and electrical design criteria. Adequate design margin exists for the voltage drop on the affected control circuits. The seismic qualification of the affected equipment is not affected. Therefore, no new accidents are created by this change.

3. Braidwood Technical Specifications 3/4.8.1 and 3/4.8.3 have been reviewed and are applicable to the specific equipment associated with this change. It is concluded that no parameters used to establish the Technical Specification limits are changed or affected. Therefore, the margin of safety, as defined in the basis for any Technical Specifications is not reduced.

EXEMPT CHANGE

E20-1-95-209-009

DESCRIPTION:

This exempt change addressed the following issues associated with the TSI Resolution Project: 1) rerouted control cable 1AF318 for the 1B Diesel Driven AF Pump (1AF01PB) out of Fire Zone 11.4-0; and 2) rewired the 1B AF pump control circuit to provide provisions to manually bypass the Low-Low suction pressure trip during emergency (fire) pump operation.

This safe shutdown control cable was rerouted to eliminate the requirement to protect it with a 3-hour rated fire barrier in Fire Zone 11.4-0; and the Low-Low suction pressure trip bypass was to eliminate protecting 2 AF system control and instrumentation cables (1AF338 and 1AF346) or their redundant cables in Fire Zones 11.4-0 and 11.5-0.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because:

   a. This change does not add any flammable material or new ignition sources to the plant.

   b. This change does not adversely affect the safe shutdown of the plant as a result of a fire.

   c. This change does not adversely impact the operation, function, or performance of either the fire detection system in the plant or the automatic fire suppression system in the Unit 1 diesel driven AF pump room.

   d. The operation of the pump from Emergency Control Panel 1AF03J with the Low-Low suction pressure trip bypassed does not affect failure modes.

   Therefore, this exempt change does not affect the operation or influence a malfunction of any equipment important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not impact the operation or performance of any plant SSC important to safety, including the 1B AF pump.

   Therefore, no new accidents are created by this change.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because operation of the auxiliary feedwater system, as described in Technical Specification 3/4.7.1.2 and B3/4.7.1.2, is not changed.

EXEMPT CHANGE

E20-1/2-95-234

DESCRIPTION

The purpose of this exempt change is to add a normally locked-open manual isolation valve in the Essential Service Water (SX) Return Line downstream of the A train Containment Chillers. This change provides downstream side isolation to facilitate maintenance activities of the A train Containment Chiller condenser and maintenance activities of the chiller isolation valves.

SAFETY EVALUATION SUMMARY

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR, is not increased since the added valves to not affect the function of the SX system. The valves are locked open during normal operation in order to prevent valve mispositioning since these valves are in a Emergency Core Cooling System (ECCS) flowpath.

2. The possibility of an accident or malfunction of a different type than previously evaluated in the UFSAR is not created because these are manual isolation valves and do not affect the function of the SX system during normal or accident conditions.

3. The margin of safety, as defined in the basis of the Technical Specification, is not reduced because the function of the SX system is not changed by the addition of these manual valves.

EXEMPT CHANGE

E20-1/2-95-245

DESCRIPTION:

The purpose of this exempt change was to improve the reliability of the battery room ventilation function by removing fan trip interlocks initiated by fan high differential pressure (dp). This change was required due to nuisance fan trips which interrupted the ventilation of the associated battery room. Battery room exhaust fan design characteristics were evaluated and the fans were proven as not needing the protective trip for a high differential pressure condition.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the exempt change does not affect the function of the ventilation system. The high dp trip was initially installed as a generic protective trip for ventilation fans and was not essential for the reliable operation of the battery room exhaust fans.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the change did not introduce any adverse impact on the ventilation system. The change served to improve the reliability of the battery room ventilation function.

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 the Tech Specs are based.

EXEMPT CHANGE

E20-1-95-246

DESCRIPTION:

This change connected the spare NR cables (1NR007 and 1NR010) which run from source range (SR) detector N-31 through penetration 1NR01E (E-22) to SR pre-amplifier 1NR07EA for use as signal cables for SR detector N-31. The previous NR cables used as N-31 signal cables (1NR006 and 1NR009) from N-31 through penetration 1NR01E (E-22) to SR pre-amplifier 1NR07EA were disconnected and spared. This change was required due to a damaged connector on cable 1NR009 at SR detector N-31.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the spare NR cables and the replaced NR cables are exactly the same type of cable, follow the same routing and this exempt change does not affect functions or operations of any equipment important to safety including safe shutdown equipment.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the spare NR cables are of the same type as the replaced NR cables and perform the same function as signal cables for source range detector N-31. No safety functions or systems are affected by this change.

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.

EXEMPT CHANGE

E20-2-95-209-002

DESCRIPTION:

This exempt change addresses the following item associated with the Thermo-Lag Resolution Project:

> Repowered three components (governor, 86G relay, and 20SD valve) for the 2A and 2B Diesel Generators (DG) (2DG01KA and 2DG01KB) from normal Supply #2 to Supply #1.

These DG system control components were repowered from normal control power Supply #2 to normal control power Supply #1 to eliminate the need to protect the cables associated with the normal Supply #2. These components were the only components powered from normal Supply #2 that were essential for the local operation of the 2A and 2B diesel generators. Repowering the 2A DG components to normal Supply #1 eliminated the need to protect cable 2DG174 in Fire Zones 3.2A-2 and 3.1-2.

This change was necessary to maintain control circuit consistency among the Byron and Braidwood Unit 1 and 2 Diesel Generators and does not specifically eliminate any TSI fire barriers. Cable 2DG174 for the 2A DG was previously protected with 3M fire barriers in Fire Zones 3.1-2 and 3.2A-2. This change eliminated the need to protect this cable in these zones; however, it remains in the 3M fire barriers since protection for other DG system cables is required.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR, is not increased because:

   a. The function, performance and operation of the onsite auxiliary ac power system is not affected by this change.

   b. This change does not influence any of the external events, i.e., tornado, responsible for a loss of nonemergency ac power event.

   c. This change does not affect the initial conditions assumed in the accident analysis.

   d. The safe shutdown capability of the plant is not adversely affected by this change.

   Therefore, this change will not affect the operation or influence a malfunction of any equipment important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not impact the operation or performance of any plant SSC important to safety, including the 2A and 2B DG. Adequate design margin exists for the voltage drop on the affected control circuits. The seismic qualification of the affected equipment is not affected. Therefore, no new accidents are created by this change.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no systems or components addressed in Technical Specifications are affected.

EXEMPT CHANGE

E20-2-95-209-003

DESCRIPTION:

This exempt change addressed the following issues: 1) rewired the 2B AF pump control circuit to provide provisions to manually bypass the Low-Low suction pressure trip during emergency (fire) pump operation, and 2) rewired the control circuit to remove the "STP" or slip trip contact of Control Switch (CS) 2HS-AF002 from the autostart circuit.

The Low-Low suction pressure trip bypass was to eliminate protecting Unit 2 AF system control and instrumentation (2AF338 and 2AF346) or their redundant cables in Fire Zones 11.5-0 and 11.6-0.

Removing the CS "STP" from the autostart circuit was to address Operating Department concerns, reference Engineering Request No. ER9500852.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because:

   a. This change does not add any flammable material or new ignition sources to the plant.

   b. This change does not adversely affect the safe shutdown of the plant as a result of a fire.

   c. This change does not adversely impact the operation, function or performance of either the fire detection system in the plant or the automatic fire suppression system in the Unit 2 diesel-driven AF pump room.

   d. The operation of the pump from Emergency Control Panel 2AF03J with the Low-Low suction pressure trip bypassed does not affect failure modes.

   Therefore, this exempt change does not affect the operation or influence a malfunction of any equipment important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not impact the operation or performance of any plant SSC important to safety, including the 2B AF pump. Therefore, no new accidents are created by this change.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because operation of the auxiliary feedwater system, as described in Technical Specification 3/4.7.1.2 and B3/4.7.1.2 is not changed.

EXEMPT CHANGE

E20-2-95-215

DESCRIPTION:

The purpose of this Exempt Change was to eliminate pressure locking concerns as identified in NRC Information Notice 95-14 and Generic Letter 95-07 with valves 2SI8811A/B. The scope of the Exempt Change included the installation of a relief line and relief valve from the bonnet of valves 2SI8811A/B to the downstream piping. This enables relief of abnormally high pressure in the bonnet of valves 2SI8811A/B to further ensure that they will open when required during switchover from the cold leg injection to the cold leg recirculation phase following a Loss of Coolant Accident.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the Exempt Change does not change the function of valves 2SI8811A/B. The probability of a LOCA is not increased. The Containment isolation function of valves 2SI8811A/B is not adversely affected. The reliability of valves 2SI8811A/B is improved by eliminating pressure locking concerns.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the new relief line and relief valve have been seismically qualified. The relief line piping is classified as high energy; however, breaks are not postulated for piping 1" and under. Failure of the relief valve to open would result in a system design consistent with the existing design. Failure of the relief valve to close would have no adverse impact since Containment isolation would continue to be provided by the 2SI8811A/B valve disc.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the function of valves 2SI8811A/B is not changed by this Exempt Change. The valves are required for ECCS system operability (Technical Specifications 3/4.5.2, 3/4.5.3) and are listed as Containment isolation valves in Technical Specification 3/4.6.3. By eliminating pressure locking concerns, this Exempt Change improves reliability of the valves to perform their ECCS function. In addition, the Containment isolation function of valves 2SI8811A/B is not changed.

EXEMPT CHANGE

E20-1-96-254

DESCRIPTION:

This exempt change provided the following activities to ensure that the alternate safe shutdown instrumentation at the fire hazards panel (FHP) is available after loss of Division 22 ac and dc power supplies.

1. Provided an alternate Division 21 diesel generator-backed power feed to the safe shutdown instruments at the FHP 2PL10J.

2. Provided channel A postaccident neutron monitor (PANM) wide-range and narrow-range indication at the FHP 2PL10J.

This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because:
   a. This change does not influence any external events responsible for a seismic event or external flood.

   b. No new flammable material or ignition sources were introduced into the plant.

   c. This change does not affect the initial conditions assumed in the accident analysis and the function, performance and operation of the safety-related systems are not affected by the cable routes, component repowering, alternate power supply, or the circuit rewiring.

   d. The installation of the electrical raceway and affected electrical penetration seals do not affect the performance or function of any SSCs necessary to mitigating the accident.

   e. The safe shutdown of the plant, as a result of a fire, is not adversely affected by this change.

   Therefore, this exempt change does not affect the operation of any equipment important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not adversely affect the operation of any plant SSC important to safety, including the affected ESF auxiliary ac power system MCC, fire hazards panel, and PANMs. The electrical raceway and cable routing associated with this change were designed and installed in accordance with the appropriate seismic and electrical design criteria. Adequate design margin exists for the voltage drop and cable ampacity on the affected control circuit. The Category I structures are not adversely affected by the additional loads created by the new raceways, panel load change or the core holes. Therefore, no new accidents are created by this change.

3. The Braidwood Technical Specifications 3/4.8.1 and 3/4.8.3 have been reviewed and are applicable to the equipment associated with this change. It is determined that no Technical Specifications are affected and, therefore, the margin of safety, as defined in the basis for any Technical Specifications is not reduced.

MINOR PLANT CHANGE

P20-0-92-619

DESCRIPTION:

This minor plant change was the installation of LAN computer cabling in Chemistry Departments Office/Lab. and the installation of a dedicated 120-V NSR power feed for the computers. The computer was connected to the service building LAN computer system. This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the Service Building LAN computer system does not interact with the function of plant operation.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the installations of computer cabling and power feed for the computers do not affect any of the safety systems or systems required to mitigate an accident.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no systems or components addressed in Technical Specifications are affected.

MINOR PLANT CHANGE

P20-1(2)-92-601
E20-0-93-286

DESCRIPTION:

This minor plant change replaced the previous flow indicators for SX flow to the CC heat exchangers with more accurate digital indicators. This change also replaced the previous normal and alternate non-ESF power supply to the miscellaneous control system cabinets with ESF supplies to provide the panel with redundant emergency diesel generator backup power in the event of a loss of off-site power (LOOP). The changes provided the operators with more accurate flow indication to facilitate control of SX flow to the CC heat exchanger. This flow indication will remain operable during a LOOP event.

This change also provided alternate power supply to Nalco CF skids OCF23MA&B and OCF24MA&B from the redundant division bus and eliminated the need for the temporary power during division outages affecting MCC134Y2. This change increases the combustible loading due to additional cable insulation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because all the components and equipment involved in this change do not affect any functions or systems important to safety.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the changes in model indicators and power supply do not result in any change to the operation of the plant or any systems. No safety systems or systems required to mitigate an accident are affected.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no systems or components addressed in Technical Specifications are impacted by this minor plant change.

MINOR PLANT CHANGE

P20-1-92-618

DESCRIPTION

The minor plant change replaced a valve and operator in the Component Cooling line from the Reactor Coolant Pump thermal barrier. The previous valve was a 4 inch Velan gate valve with a Limitorque SMB-00 operator and the replacement is a Westinghouse 3 inch gate valve with a Limitorque SB-0 operator. The valve and operator were replaced to increase the margin between the operator thrust capability and the thrust required under design basis conditions. This change was recommended as a result of the review performed in accordance with NRC Generic Letter 89-10.

SAFETY EVALUATION SUMMARY

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because increasing the margin between operator thrust capability and required thrust under design basis conditions does not affect or change how the valve functions in an accident. This change only increases the available thrust that the operator applies to the valve stem.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the function of the valve is not changed. The reliability of the valves has been increased thus improving their ability to mitigate the consequences of an accident. The slight increase in stroke time is within the requirements of the UFSAR. The component cooling flow to and from the reactor coolant pumps is not adversely affected.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the function of the Component Cooling system has not been changed. The stroke time for this valve has been slightly increased, however, the time is within UFSAR requirements. Valve 1CC685 is a different size and this requires a change to UFSAR.

MINOR PLANT CHANGE

P20-1-93-600

DESCRIPTION

The minor plant change installed new motor and motor pinion gears to increase the motor gearing capability of the Limitorque actuator. The purpose of increasing the motor gearing capability was to increase the margin between the operator thrust capability and the thrust required under design basis conditions. This change was recommended as a result of the review performed in accordance with NRC Generic Letter 89-10.

SAFETY EVALUATION SUMMARY

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because increasing the margin between operator thrust capability and required thrust under design basis conditions does not affect or change how the valve functions in an accident. This change only increases the available thrust that the operator applies to the valve stem.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the function of the valve is not changed. The reliability of the valves have been increased thus improving their ability to mitigate the consequences of an accident. The increased stroke time is within the requirements of the UFSAR.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the function of the Residual Heat Removal system has not been changed. Valves 1RH8716A and B have an increased stroke time and this requires a change to UFSAR tables 6.3-12, 6.3-13 and 6.3 -o change the operator response time allowance for manual procedure steps for Refueling Water storage Tank outflow calculations.

SETPOINT/SCALING CHANGE

SSCR 92-016, SSCR 92-017, SSCR 92-018,
SSCR 92-019 & SSCR 92-020

DESCRIPTION:

These SSCRs initiated documenting the existence of the outside air damper controllers for the Lake Screen House ventilation fans OA,OB,OC,OD and OE by revising the related control and instrumentation diagrams and the instrument data sheets. The SSCRs also required a setpoint to be specified for the controllers. The reason for the SSCR is to show the controllers in the appropriate design documents and establish a setpoint to control the outside air damper such that proper temperature in the lake screen house will be maintained.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR, is not increased because no new equipment is added and the control scheme is only being updated to meet the intent of the original design.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because no new equipment was added. These SSCRs do not affect the current UFSAR analysis.

3. The margin of safety, as defined in the bases for any Technical Specification, is not reduced because these SSCRs do not affect any Technical Specification or its associated basis. The control scheme is only being updated to meet the intent of the original design.

SETPOINT/SCALING CHANGE

SSCR 93-014

DESCRIPTION:

This SCCR revises the instrument data sheets(IDATA) to change the Unit 1 S/G LO-LO Level Reactor trip setpoint in support of implementation of amendment 42 of the Technical Specification. The LO-LO trip was revised from 40.8% to 33.0%. The associated alarm function was also revised from 45.8% to 38.0% and the Anticipated Trip Without Trip (ATWT) from 37.8% to 30.0%.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR, is not increased because the RPS and the ATWT (ATWS) will function per design as previously analyzed.

2. The possibility of an accident or malfunction of a type different than any previously evaluated in the UFSAR is not created because no new equipment was added.

3. The margin of safety, as defined in the bases for the technical specification, is not reduced because the safety function of the RPS or ATWS is not changed and the LO-LO level trip is above the Safety Analysis Limit(13.7%).

TEMPORARY ALTERATION

95-1-010 & 95-2-014

DESCRIPTION:

The temporary alteration installed for each unit was to improve the reliability of the battery room ventilation function by removing fan trip interlocks initiated by fan high differential pressure (dp). This change was required due to nuisance fan trips which interrupted the ventilation of the associated battery room. Battery room exhaust fan design characteristics were evaluated and the fans were proven as not needing the protective trip for a high differential pressure condition.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the exempt change does not affect the function of the ventilation system. The high dp trip was initially installed as a generic protective trip for ventilation fans and was not essential for the reliable operation of the battery room exhaust fans.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the change did not introduce any adverse impact on the ventilation system. The change served to improve the reliability of the battery room ventilation function.

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 the Tech Specs are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-008

DESCRIPTION:

This UFSAR revision changes incorrect references to compressed gases stored in containment and deletes reference to hydrogen bottles which are not installed in the auxiliary building.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the use of air instead of nitrogen to supply the PORVs has been previously evaluated in the UFSAR as being acceptable. Also, operation of the VCT with hydrogen from the gaseous waste system has been evaluated in the UFSAR and was found to be acceptable.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the revision of UFSAR Table 3.5-10 to accurately document that air instead of nitrogen is used to supply the PORVs and deletion of reference to hydrogen in the auxiliary building to supply the VCT does not adversely affect any of these components or any other SSCs. Use of air for operation of the PORVs has been previously evaluated in the UFSAR and SER 3.9.3 as being adequate to ensure that the PORVs are capable of performing their design functions during accident conditions. Operation of the VCT with hydrogen from the gaseous waste system instead of the hydrogen source from the 1850 scf bottles stored in the auxiliary building has been evaluated in the UFSAR and was found to be acceptable.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the revision of UFSAR Table 3.5-10 to accurately reflect that air instead of nitrogen is used to supply the PORVs and deletion of reference to hydrogen in the auxiliary building to supply the VCT does not affect the design functions or normal operation of any of these components or any other SSCs.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-013

DESCRIPTION:

This UFSAR revision updates the UFSAR to reflect the results of Inadvertent ECCS Actuation at Power reanalyzes.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the changes in assumptions for the reanalyzes provides for a conservative analysis of the pressurizer overfill scenario. The results of the analysis show that RCS pressure boundary integrity is maintained by allowing water relief through pressurizer PORVs. However, PORV operation does not increase the probability that it will malfunction and only one PORV is required to mitigate the event so a single failure will still yield acceptable results.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the event is already evaluated in the UFSAR. Only new assumptions are being used to assure that a pressurizer overfill scenario has been analyzed conservatively.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the DNBR limits are met and the water relief through pressurizer safety valves is precluded by relief through the pressurizer PORVs.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-014

DESCRIPTION:

This UFSAR reflects the deletion of calibration methodology of RCFC inlet and outlet dewpoint monitor loops. The current UFSAR text does not accurately describe the calibration process and the methodology used.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because there is no effect on equipment failure and no effect on plant operations with the deletion of the methodology as described in the UFSAR for the calibration of RCFC dewpoint temperature instrumentation.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because there are no accidents impacted by the calibration methodology used for the dew point indicating loop since the accuracy of dewpoint is not needed to fulfill the intended function of the dewpoint indicating loop.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because dewpoint indication is not used to determine or supplement the margin of safety.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-015

DESCRIPTION:

This UFSAR revision reflects that the battery room exhaust fans interlock for the high differential pressure trips will be eliminated.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because removing the DP trip will reduce the probability of failure of the battery room exhaust fans. Improved fan reliability will not lead to any increased radiological consequences of the accident. The batteries are assumed to be available for an accident. Improved fan reliability will not increase the chance of battery malfunction.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the change will result in more reliable battery room exhaust fan operation. There will be no adverse impact on the system to create a chance of a different kind of accident.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because improving the reliability of the ventilation function will also improve the availability of the batteries to function during an accident .

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-036

DESCRIPTION:

This UFSAR revision reflects the as-built configuration of the jacket water cooling system standpipe for the Emergency Diesel Generators.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the change does not represent physical changes to the plant or changes to the way the plant operates. The changes are editorial in nature and have no impact on plant operations.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the change is to clarify the design basis description for the jacket water standpipe. Supporting information for the proposed changes were retrieved from previous design files or recreated from calculations and other design information transmittal.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change does not represent physical changes to the plant or changes to the way the plant operates. The changes are editorial in nature and have no impact on plant operations or other plant accident conditions.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-038

DESCRIPTION:

This UFSAR revision reflects the deletion of reference to the standby hydrogen tanks since the tanks have not been used. The procedure changes will allow the regulators to receive pressure but to be isolated on the downstream side to prevent chattering.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the reserve standby tanks are not used. The hydrogen supply is sourced from the vendor tanker trucks to provide the capacity needed for plant operations. Isolation of the reserve header will have no impact on plant operations.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the removal of the reserve hydrogen bottles reduces leaks on the system and the repositioning of the valves improve the reliability of the regulators.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the removal of the use of the standby tanks only improves the reliability of the system. Isolation of the reserve header will have no impact on plant operations.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-041

DESCRIPTION:

This UFSAR revision reflects the removal of discussion of response time for the containment sump level transmitters, containment level transmitters and the containment pressure transmitters. The response time information in the UFSAR is based on vendor specifications and it is not required per Regulatory Guide 1.97.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the removal of discussion has no bearing on the function, operation or testing of the loops. The probability of a line break inside containment is not increased. The function or operation of the instrument loops to provide adequate and timely information to the operators is not adversely impacted and no other safety equipment is affected.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the function, operation or testing of the affected instrument loops is not affected and plant operation is unaffected.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the manner in which the function or operation of the instrument loops to provide adequate and timely information to the operators is not impacted and no other safety equipment is affected.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-042

DESCRIPTION:

This UFSAR revision reflects the deletion of inappropriate text in the UFSAR regarding applicability of Reg Guide 1.140 which does not apply to the Gaseous Waste (GW) system. The gaseous waste system is not a plant atmospheric cleanup or HVAC system and does not contain any filtration units such as HEPA filters or charcoal adsorbers, the GW system is not subject to the requirements under Reg Guide 1.140.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the gaseous waste processing system as discussed in Chapter 11 is designed to remove fission product gases from the reactor coolant. Since the UFSAR text clarification does not alter the functional requirements of the GW system nor its subsystems or components, the probability of the decay tank or associated piping failure is unaffected. The proposed UFSAR revision removes inaccurate description of the GW design, testing and maintenance requirements in reference to Reg Guide 1.140. This text revision clarifies the applicable Reg Guide required to be met for GW and has no impact to the function and operations of any safety equipment.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this text revision does not alter the functional requirement of the GW system or any other subsystems. The reference to Reg Guide 1.140 for GW system is appropriate and removed. Additionally, there is no impact to the function and operations of any other safety equipment.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the manner in which the function or operation of the GW or any other related systems is affected.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-046

DESCRIPTION:

This UFSAR revision reflects the incorporation of the description of Westinghouse ZIRLO, Vantage+ and Performance+ fuel features, revised reference to the peak linear power, removal of power spike factor description and the incorporation of improved IFBA patterns.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the use of ZIRLO cladding, Vantage+ and Performance+ fuel features have been shown to have met all licensing and design basis acceptance criteria. The peak linear power density revised reference corrects a change in the referenced parameter as used in the Westinghouse analysis. The elimination of the power spike factor due to fuel densification reflects a revised Westinghouse reload analysis methodology which has been approved by the NRC. Since all the design criteria and standards continue to be met for the fuel-related changes, the consequences of an accident is not increased.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the ZIRLO cladding, Vantage+ and Performance+ fuel features have been shown to have met all licensing and design basis acceptance criteria. The peak linear power density revised reference corrects a change in the referenced parameter as used in the Westinghouse analysis. The elimination of the power spike factor due to fuel densification reflects a revised Westinghouse reload analysis methodology which has been approved by the NRC. No new failure mechanism has been created nor will these changes cause the fuel or any other SSC's to exceed any licensed limit.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the current fuel design recognized in the Technical Specification is the Vantage5 design. Vantage+ or Performance+ fuel meets the design criteria of the Vantage5 fuel design and thus are in agreement with the Technical Specification and as such will not reduce the margin of safety in Technical Specification. Each reload core will be evaluated using NRC-approved methodologies and fuel rod design models and methods. These methodologies also include evaluation of the core peaking factors and core average linear heat effects.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-047

DESCRIPTION:

This UFSAR revision reflects the revision of the reactor cavity ventilation subsystem design bases to limit the normal maximum exhaust air temperature from the cavity and annulus areas to 124.7 °F.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the proposed change revises the UFSAR to reflect the EQ design temperature for the reactor cavity ventilation system. The proposed change does not affect the operation of any plant systems. The equipment important to safety in the reactor cavity areas has been qualified for the maximum normal temperature of 124.7 °F.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the proposed change does not adversely affect the function of any systems or components. Reference to the EQ design temperature for the reactor cavity ventilation system does not create any new accident scenarios.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the reactor cavity ventilation system design basis is not discussed in the Technical Specifications. Therefore, the proposed change to reference the maximum EQ temperature in the rector cavity area has no affect on the Technical Specification limits and there is no safety margin affected.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-050

DESCRIPTION:

This UFSAR revision reflects the routine practice during refueling at Braidwood and Byron includes full core offloads to facilitate fuel shuffling and reactivity management concerns. Full core offloads are discussed in the UFSAR but it was determined that clarifications are necessary to be made in the UFSAR in response to NRC IN 95-54 and other related information.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the clarifications to the description in the UFSAR regarding core offload practice do not affect any equipment operations or any accident analysis assumptions. This clarification does not represent a change to the basis of what has been previously analyzed, reviewed and approved.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the proposed change is only a clarification for the routine practice of full core offloads during refueling outages. This mode of offload during refueling has been previously reported to the NRC in the Braidwood high density rerack submittal and the NRC has approved the installation of the high density storage racks in the spent fuel pool. However, the routine offload practice at either Braidwood or Byron is not clearly identified and described in the UFSAR which then becomes the basis for this change.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this proposed change is a clarification in the UFSAR description of the routine practice of full core offloads during refueling and does not affect any operating or safety limits stated in the Technical Specifications or its bases.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-052

DESCRIPTION:

This UFSAR revision reflects the clarification and consistency of information regarding heat origin for the turbine-driven main feed pumps under different operational conditions.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the clarifications to the description in the UFSAR regarding heat origin for the turbine-driven main feed pumps are not assumed in any accident analyses. The systems or components affected by the heat source are not required to support the safe shutdown of the reactor.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the systems or components affected by the heat source are not required to support the safe shutdown of the reactor. Operationally the hot reheat steam will be used for the main feedwater pump only if there is a failure in the main steam supply; however, there are no other equipment failures affected by the change in heat origin. The systems or components affected by this change are not credited in any accident analyses.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this proposed change in the description of the steam supplied to the Main Turbine Driven Feedwater Pumps do not change the parameters upon which Technical Specifications are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-054

DESCRIPTION:

This UFSAR revision to Appendix A states compliance with Revision 3 of Regulatory Guide 1.118 with exceptions to the regulatory position on the use of circuit alterations during safety system testing.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the UFSAR revision has no impact on plant operations during all operating modes and no accidents are affected by the exceptions taken to the Reg Guide for the safety system testing.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because there are no new administrative, procedural, or operational controls necessary to implement the requirements and exceptions taken to this revision. The exception taken reflects the current station testing practices and/or methodology. These alterations are independently verified during both installation and restoration. This practice permits complete functional verification of circuit operation while ensuring the original circuit configuration is maintained.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because compliance to Revision 3 of Reg Guide 1.118 with the exceptions taken does not change the parameters upon which Technical Specifications are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-059

DESCRIPTION:

This UFSAR revision incorporates changes resulting from the two most recent Steam Generator Tube Plugging (SGTP) analysis. The first SGTP also incorporated a positive Moderator Temperature Coefficient (MTC) and reduced Thermal Design Flow (TDF) into the analysis of record.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR has each been evaluated resulting from the increased SGTP and other design parameter changes. The accidents in the revised analyses were all evaluated and determined to be acceptable with respect to accident probability increase, off-site dose increase and equipment malfunction probability.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the impact of the revised analyses due to increased SGTP, positive MTC and reduced TDF has each been evaluated and was determined to be acceptable with respect to not initiating a new accident.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the impact of the revised analyses due to increased SGTP, positive MTC and reduced TDF does not change the parameters upon which Technical Specifications are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-060

DESCRIPTION:

This UFSAR revision reflects the addition of a new section in Appendix A to show compliance with Regulatory Guide 1.160 pertaining to the implementation of the Maintenance Rule.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased since the Maintenance Rule addition does not affect plant operations and there are no SSC's being added, removed or modified.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the Maintenance Rule is a monitoring program that will not affect plant operations or create any new or different failure modes.

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

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-061

DESCRIPTION:

This UFSAR revision reflects the revision of the description of the CVCS demineralizer resin. This change reflects the use of the cation and mixed bed demineralizer of the CVCS.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased since there are various procedural controls in place that ensures a reactivity excursion is not created. In the event of an accident, the CVCS is isolated to contain radioactive materials within containment. The demin vessels and their resins will not have an impact n the reactor coolant chemistry and therefore the offsite dose will not be influenced. Since the demin beds will not be able to forward any water into the reactor coolant system, no safety equipment will be affected.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the overall function of the CVCS system is maintained. Only the way the demineralizer vessels and resins are used has changed and has been evaluated.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there are no operating limits affected by the utilization of different resins in the CV demin vessels and it does not change the parameters upon which Technical Specifications are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-064

DESCRIPTION:

The size of the Reactor Coolant Vent System (RCVS) lines shown in UFSAR Section E.19 and Figure E.19-1 applies to Byron only. The text is being updated to include the size of the Braidwood RCVS lines which is 1 inch. The drawing notes are revised to specifically mention the differences in line size and number.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased since the changes are to clarify Braidwood the RCVS line size in the text and the drawing notes to specifically mention the differences in the line size and number. These changes are considered editorial.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the changes are to clarify Braidwood the RCVS line size in the text and the drawing notes to specifically mention the differences in the line size and number. These changes are considered editorial. There are no changes in plant or equipment operations.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the text and figure clarifications do not change the parameters upon which Technical Specifications are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-065

DESCRIPTION:

This UFSAR revision reflects the current procurement practices governing electrical cables and removes references to specific cable vendors..

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased since the changes will not affect plant operations or functions of any equipment used to mitigate the consequence of an accident. The new cables will be procured to the equivalent electrical requirements of the construction cable. The new cable will meet the requirements of ComEd standard N-EM-0035.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the new cables will be procured to the equivalent electrical and environmental requirements of the construction cable.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the new cables will be procured to the equivalent electrical and environmental requirements of the construction cable and there are no Technical Specifications or their bases affected by this change.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-067

DESCRIPTION:

Several changes to the UFSAR are being made under this DRP because of the use of Regulatory Guide 1.99, revision 2 to analyze the material and stress characteristics of the reactor vessel over time. The applicability of Regulatory Guide 1.99, revision 2 has been evaluated by the SER for Amendment No. 64 (NPF-72 & 77). In addition, during a review of applicable UFSAR sections several typographical mistakes and needed enhancements were discovered and implemented under this DRP.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequences of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased. The applicability of Regulatory Guide 1.99, revision 2 has been evaluated by the SER for Amendment No. 64 (NPF-72 & 77) and GL 88-11. Using the guidance within Reg Guide. 1.99 rev. 2, the effect of neutron irradiation of the reactor vessel material was calculated to be reasonably conservative and acceptable by the NRC within the above SER.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created. The calculated effect, using guidance within REG GUIDE. 1.99 rev. 2 of neutron irradiation of the reactor vessel material, is reasonably conservative and acceptable by the licensee and verified by the NRC within the above SER.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced. The calculated effect, using guidance within REG GUIDE. 1.99 rev. 2 of neutron irradiation of the reactor vessel material, is reasonably conservative and acceptable by the licensee and verified by the NRC within the above SER. The additional editorial corrections to the UFSAR will have no effect on the margin of safety as defined in any Technical Specification basis.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-069

DESCRIPTION:

This UFSAR revision reflects the revision of the Least Negative Doppler Power coefficient and the Doppler-only Power Defect values used in the reload safety evaluation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the reload safety evaluation has considered the effects due to revised values of the Least Negative Power coefficient and the Doppler-only Power Defect and all fuel mechanical, thermal-hydraulic and transient analysis design criteria continue to be met.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the revised values of the Least Negative Power coefficient and the Doppler-only Power Defect have been considered in each reload safety evaluation. No new single failure mechanism has been introduced nor will the core operate in excess of pertinent design basis operating limits for the key safety parameters.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the revised values of the Least Negative Power coefficient and the Doppler-only Power Defect do not affect any Technical Specifications or their bases. The reload design has been shown to meet all licensing basis acceptance criteria.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-070

DESCRIPTION:

This UFSAR revision reflects the rewrite of Appendix E.21 for Postaccident Sampling (PAS) system. The postaccident sampling program was revised to eliminate commitments that were excessive based on the review of regulatory documents requiring a postaccident sampling program.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the assumptions and conditions evaluated in the accident analysis are not changed. In addition, the responses to an accident as defined in the site's Generating Station Emergency Plan (GSEP) and Emergency Response Procedures (ERP) are not affected by these changes. The changes made to the PAS program affect a limited number of sampling and analytical capabilities that were identified as unnecessary in the course of mitigating an accident and for providing information to the decision process for the protection of the public during an accident.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the sampling and analysis capabilities that were removed from the program provided a monitoring function only which was initiated after the accident started. The data generated from these sampling and analysis capabilities was not being used by the site's GSEP or by the ERPs. The accident analysis described in the UFSAR does not take credit for these capabilities. The information that could be generated by these capabilities would not be used during the mitigation of an accident.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the proposed changes do not affect any Technical Specification parameters or their bases. The PAS program is intitialized after an accident has occurred and there are no chemistry specification parameters defined or bases described for chemistry parameters under an accident condition.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-083

DESCRIPTION:

This UFSAR revision reflects the removal of reference to the specific hydrogen gas temperature of 108 °F in the main generator.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the temperature of the main generator hydrogen will still be operated within the OEM recommended limits. The main generator is not a safety-related SSC and does not affect any safety-related SSC's to perform their design functions.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the change only removes the reference to the operating temperature of the hydrogen gas inside the main generator but all alarm limits and trip setpoints remain unchanged.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the removal of the specific hydrogen temperature in the UFSAR do not change the parameters upon which Technical Specifications and their bases are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-084

DESCRIPTION:

This UFSAR revision reflects the clarification that the diesel-driven SX pump exists at Byron only but not at Braidwood.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the change is a clarification in the equipment description to indicate the specific equipment installed at each station. This clarification does not affect any equipment or plant operations.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the change properly reflects the specific equipment installed at each station. This clarification does not affect any equipment or plant operations.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the clarification of the description of the installed equipment does not change the parameters upon which Technical Specifications and their bases are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-088

DESCRIPTION:

This UFSAR revision reflects the revised description of the radwaste systems and operation to reflect current practices.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because of the following determination:

   (a) the operation of the waste gas decay tanks or associated piping that are involved with the initiation of waste gas system leak or failure. The proposed changes to the waste gas system involves changing the operation of the backup waste gas compressor from automatic to manual. This does not affect the system activity or any other accident assumption. There are also no changes to the amounts or types of radionuclides present and no specific operator actions are required to mitigate consequences of this accident. Since the accident analysis assumptions are not impacted by the compressor operation, the other equipment operations remain unaffected. The waste gas decay tanks remain isolated so that only one tank may be released. Therefore, the consequences are not changed and,

   (b) the proposed changes have no effect on the radioactive liquid waste system leak or failure that could cause a release of the radioactive inventory of the spent resin storage tank or boron recycle holdup tanks. The initiators for these releases are operator error and small cracks that propagate. However, operator actions are not credited in the accident. Additionally, the changes do not affect the source terms for the radwaste systems so the dose consequences remain bounding. Since the proposed change delete references to equipment neither used nor required to process waste, the remaining equipment will not be operated in a different manner. As such, there are no changes to equipment malfunctions or to the activity in the radwaste system so the consequences are not changed.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because none of the changes affects the ability of a system or process to meet effluent limits. Alternate processing methods are desirable to have the flexibility to best handle each waste stream so that the activity limits and waste form requirements are met. There are no changes to the source terms, and all effluent limits continue to be met. Operation of the radwaste systems is not an accident initiator.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the because none of the changes affects the ability of a system or process to meet effluent limits and the proposed changes do not change the parameters upon which Technical Specifications and their bases are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-090

DESCRIPTION:

This UFSAR revision reflects an exception taken to the transient Emergency Diesel Generator (EDG) loading requirements for emergency load sequencing in Regulatory Guide 1.9, Revision 3.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the increase of the underfrequency EDG time delay will not affect the reliability of the switchyard, SATs or other auxiliary power equipment. The frequency response for a starting sequence will not affect the ability of the EDG to perform safety functions. Increasing the underfrequency EDG time delay and taking exception to Reg Guide 1.9 was found acceptable because the underfrequency trip remain affected and therefore does not affect any of the plant safety equipment.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the slight frequency transient will have no significant impact on the licensing basis accidents. The ECCS flowrates will continue to meet the required design flows during all accident conditions. All other required equipment is expected to operate normally during the underfrequency transient due to the short duration of the transient and its inconsequential impact on flowrates and current.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change will not adversely impact any of the systems operations or their mitigating functions during accident conditions and does not change the parameters upon which Technical Specifications and their bases are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-092

DESCRIPTION:

This UFSAR revision indicates that the pressurizer backup heaters are energized during normal operations. The revision is necessary to reflect current operating conditions.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because in UFSAR section 15.2.8.2, it describes an analysis was performed to determine the effects of leaving the backup pressurizer heaters on during plant transients. It was shown that the effects of leaving the backup heaters energized during plant transients are negligible.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the safety analysis was performed that has considered the effects of leaving the backup pressurizer heaters on during plant transients. It was shown that the effects of leaving the backup heaters energized during plant transients are negligible.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change will not adversely impact the assumed mitigating functions of any safety-related systems during accident conditions and does not change the parameters upon which Technical Specifications and their bases are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-093

DESCRIPTION:

This UFSAR revision reflects the description of the installation of the equipment staging structure adjacent to the emergency hatch.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because this installation of this structure does not affect any SSC's functions required during accident conditions. In addition, the requirements on containment building penetration closure and operability ensures that radioactive release resulting from an accident and therefore dose consequence are not increased. The staging structure does not contain any safety-related equipment nor does it serve as a barrier for offsite dose. Also, this building does not adversely affect the personnel hatch.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this structure does not affect any SSC's functions required during accident conditions or during normal plant operations. The effects due to the installation of this structure have been evaluated for the fuel drop accident in the containment and did not introduce any different accident scenarios.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change will not adversely impact the assumed mitigating functions of any safety-related systems during accident conditions and does not change the parameters upon which Technical Specifications and their bases are based.

OTHER UFSAR CHANGES

UFSAR Draft Revision Package 6-099

DESCRIPTION:

This UFSAR revision reflects the correction of description of the EDG alarms, mesh size of starting air filters and lube oil sampling frequency.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because these changes do not have any effects on the initiating events leading to the listed accidents or the reliability and availability of the EDG. The EDG is only required to provide emergency power under certain accident conditions and these changes have inconsequential effects on the EDG design functions during accident.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the change regarding the EDG alarm was a correction of the of the order of description about the local alarms. The change to the stated size of the starting air system filters reflects changes made and results of evaluations which was found acceptable. Frequency change in the lube oil sampling and analysis reflects vendor recommendation. None of these changes will create new failure modes or a different type of accident.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change will not adversely impact the design function of the EDG and any assumed mitigating functions of any safety-related systems during accident conditions and does not change the parameters upon which Technical Specifications and their bases are based.

FPR FDRP 16-030

PROCEDURE CHANGE M-94-0585-00

DESCRIPTION:

This change took exception to Regulatory Guide 1.120 Quality Assurance Requirements for Fire Protection as documented in Chapter 3 of the B/B FPR. In particular, Control of Purchased Material as described on Page 3.4-2 Item C of the FPR. This change allowed purchase of CO_2 under one stored item number as not safety related, as opposed to regulatory related.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the quality of CO_2 is expected to remain the same, and there is no change to the CO_2 system which is still expected to be operable to protect safety-related, safe shutdown equipment as required.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not affect plant operation; it only deleted the requirement for P.O. certification on each bulk shipment. The P.O. still requires NFPA-12 to be met.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because all changes have no impact to the requirements or bases of the Technical Specifications.

FPR FDRP 17-009

FACILITY CHANGE ER9400073/DCP9500039

DESCRIPTION:

The Hose Station 243 located in UCSR 1EE2 at Elevation 463-feet, column-row Q-13, was abandoned in place due to safety/accessibility concerned, and its function was replaced by Hose Station 242.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because no new ignition sources or new failure modes have been introduced by the abandonment of Hose Station 243. The function of Hose Station 243 was replaced by Hose Station 242, which provides adequate manual water suppression coverage with better accessibility.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the adequate coverage of this fire zone remain unchanged. No safety systems or systems required to mitigate an accident are affected.

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.

FPR FDRP 17-012

EVALUATION PIF# 454-200-94-05000

DESCRIPTION:

An operability evaluation was performed to assess the possible effects of a turbine building fire causing short circuiting in the CO_2 panels for the diesel generator (DG) rooms and thereby isolating ventilation for both DG rooms on either Unit 1 or Unit 2. The evaluation concluded that sufficient time is available for manual actions to be performed to restore ventilation, and ensure continued DG operation.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because the evaluation indicates that manual actions can be taken to restore DG room ventilation if DG room ventilation were lost due to a turbine building fire causing a spurious CO_2 actuation.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the evaluation determines that sufficient time is available to perform manual actions to restore DG room ventilation prior to potential DG damage occurring.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no systems or components addressed in Technical Specifications are affected by this operability evaluation.

FPR FDRP 17-031

TECHNICAL CHANGE OSR NO. 95-063

DESCRIPTION:

Revisions were made for the following surveillance/test frequencies:

1. Revised the surveillance frequency for smoke detector trip actuating device operational tests from every 6 months to every 18 months.

2. Revised the surveillance frequency for rate compensation heat detector trip actuating device operational tests from every 6 months to every 18 months.

3. Revised the surveillance frequency for testing fire detector circuit supervisory functions from every 6 months to every 18 months.

   By extending the test frequencies Braidwood Station reduces the time and expense associated with performing these surveillances without any adverse effects on plant operations or significant reduction in fire protection system reliability.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because there are no physical additions or alterations to the plant configuration as a result of this change. No new fire hazards or ignition sources are being created or introduced.

   The changes do not significantly affect system/component reliability; therefore, the 'defense -in-depth' concept and its associated fire protection systems and equipment will remain effective and will not be adversely affected.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because evaluations were conducted to review fire protection system surveillance/testing requirements and conclusion was made that the frequencies for testing fire detectors (ionization smoke detectors and rate compensation heat detectors) and the circuit supervisory function can be changed from 6 months to 18 months.

   The 'defense-in-depth' concept on which the fire protection program is based and its associated fire protection systems and equipment remain effective and the level of fire protection do not change. Therefore, these changes do not adversely affect the ability to achieve and maintain safe shutdown in the event of fire.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no systems or components addressed in Technical Specifications are affected.

FPR FDRP 17-032

TECHNICAL CHANGE CHRON 313506

DESCRIPTION:

There is unprotected (e.g., not fireproofed) structural steel forming part of several fire-rated assemblies (auxiliary building elevator equipment room walls, dumbwaiter walls, and HVAC control panel room walls) in Fire Zone 11.7-0.

This change revised the appropriate sections of the Fire Protection Report to indicate the presence of the unprotected steel.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence, or the consequence of an accident, or a malfunction of equipment important to safety, as previously evaluated in the UFSAR is not increased because there is no physical addition or alteration to the plant configuration as a result of this change, and no new fire hazards or ignition sources were created or introduced.

   Based on the plant configuration, the existence of the unprotected steel in the fire-rated assemblies does not adversely affect the ability to achieve and maintain safe shutdown as required per 10CFR50 Appendix R. The 'defense-in-depth' concept and its associated fire protection systems and equipment remain effective and are not adversely affected.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the presence of the unprotected steel does not create the potential for fire to spread between fire zones, and the level of fire protection remains unchanged.

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.

FPR FDRP 17-037

TECHNICAL CHANGE FROM FDRP 17-037

DESCRIPTION:

This change to the Fire Protection Report (FPR) was required to incorporate the batteries associated with the diesel driven fire pump and Unit 1 and 2 auxiliary feedwater pumps. The fire load associated with the batteries was not in the FPR.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or a malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because fire hazards associated with the batteries do not exceed the capabilities of the existing fire protection features in each room, and do not affect equipment important to safety. The probability of a design basis fire in the affected rooms will not be measurably increased.

2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the fire hazards associated with the batteries are within the protection capabilities of the existing fire protection features in each room. Therefore, adequate fire protection is provided and the existing safe shutdown analysis remains valid. This change does not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire in any of the affected areas.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because none of the parameters used to establish the Technical Specifications are affected.