



Commonwealth Edison  
Byron Nuclear Station  
4450 North German Church Road  
Byron, Illinois 61010

March 18, 1994

LTR: BYRON 94-0107  
FILE: 1.10.0101

William T. Russell  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

ATT: Document Control Desk

SUBJECT: Byron Station Units 1 & 2  
10 CFR 50.59 Annual Report  
NRC Docket Nos. 50-454 and 50-455

Dear Mr. Russell:

Pursuant to 10 CFR 50.59(b)(2), Commonwealth Edison is providing the required annual report for Byron Station (Facility Operating License Nos. NPF-37 and NPF-66). This report is being provided for the 1993 calendar year and consists of descriptions and safety evaluations for changes to the facility as described in the safety analysis report. No tests or experiments governed by paragraph (a) of 10 CFR 50.59 were performed. Also included as part of this report, are changes made to features of the fire protection program not previously presented to the NRC Staff.

Please direct any questions regarding this matter to this office.

G. K. Schwartz  
Station Manager  
Byron Nuclear Power Station

GKS/LL/rp

Enclosures

cc: G.F. Dick, Byron Project Manager-NRR  
J.B. Martin, Regional Administrator-RIII  
H. Peterson, Byron Senior Resident Inspector  
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MODIFICATION M6-1-87-168

DESCRIPTION:

This modification installed a loop seal in the auxiliary feedwater (AF) suction header stand pipe to prevent potential air induction into the AF suction piping. The installation of this modification allowed the return of the essential service water (SX) switchover and AF pump trip setpoints to their original design values.

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 AF pumps still perform their safety function since water is supplied per the original design. The installed loop seal eliminates the possibility of air inducting into the AF suction piping.
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 only a piping reconfiguration. The condensate (CD) system supplies suction to AF system per the original design. The safety related SX system is still available as a in back-up to the CD system for suction to AF system. Except for returning the switchover and trip setpoints to their original values, the AF system has not been impacted.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the setpoints (SX switchover and trip) are returned to their original Technical Specification values in Technical Specification Table 3.3.4.

MINOR PLANT CHANGE M6-1/2-88-003

DESCRIPTION:

A safety related power source (from the instrument and control racks) was provided to the safety related control relays for the pressurizer power operated relief valves. The change provides manual pressurizer pressure control capability following a loss of offsite power.

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 power operated relief valve's control logic was not altered in any way. Changing the source of control power for these valves increased the availability of the valves for pressure control following a loss of offsite power.
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 of the power operated relief valve and its control circuit logic remained unchanged.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the automatic operation reliability of the Power Operated Relief Valves was increased by providing control capability during a loss of offsite power event.

MODIFICATION M6-0-88-072-B1

DESCRIPTION:

The kitchen located near the Main Control Room was converted into a locker room.

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 affect the initial conditions of any accident in the UFSAR. The kitchen is not required for accident mitigation. The change does not affect any of the three fission product barriers such that offsite dose is changed. No equipment important to safety is affected by this change.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because no plant systems important to safety are affected.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no margins of safety involve this kitchen. No Technical Specifications are affected by this design change.

MINOR PLANT CHANGE M6-2-89-699

DESCRIPTION:

The minor plant change lowered the set pressure of letdown heat exchanger outlet header relief valve, 2CV8119, from 300 psig to 230 psig. The change was to address operational problems with diaphragm valves that could have been exposed to pressures in excess of 300 psig due to their location in the system.

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 lowering the valve setpoint allows the valve to perform its intended function. The lower setpoint protects the diaphragm valves in the system, yet it is high enough to avoid lifting the relief valve during normal, steady state operation. Failure modes are bounded by the UFSAR analysis. Furthermore, no credit is taken for the relief valve to mitigate any accidents.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because relief valve failure is within the scope of the small break loss of coolant accident. The change to the relief valve setpoint does not cause the initiation of any accidents or create new failure modes.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the setpoint is not the basis for any Technical Specification. The modification allows the valve to perform its intended function.

MODIFICATION M6-2-90-013

DESCRIPTION:

This modification provided the capability to manually vent the reactor vessel head in the event that power to the solenoid operated vent valves is discontinued. The modification also eliminated the loop seal in the vent piping, which had been inadvertently installed during initial construction.

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 both the added manual and existing solenoid operated vent paths are designed to the same criteria. The new manual vent path is bounded by the small break loss of coolant (LOCA) analysis, and the manual valves are supplied to an approved design criteria.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the addition of the manual operated vent valves is bounded by the small break LOCA analysis.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because Technical Specifications require that the solenoid operated vent path be operable in Modes 1,2,3 and 4. Addition of a manual operated vent path, which can be used only in Modes 5 and 6, does not affect solenoid valve or vent path operation.

MODIFICATION M6-1-90-025

DESCRIPTION:

The modification added taps to piping associated with the Condensate Storage Tank (CST) to provide a clean-up loop for purification of condensate water. The system allows clean-up using a station supplied pump connected to the new suction tap and discharging through a vendor supplied demineralizer back to the CST.

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 CST has no effect on the probability of an accident occurring. Auxiliary feedwater (AF) takes suction from the CST after an accident has commenced and normal feedwater is lost. The AF system has adequate back up water from essential service water (SX) in the event that the CST is unavailable. Addition of taps to the CST does not impact SX system interface with AF.
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 and reliability of the CST remain the same. The effect of clean-up loop taps on the integrity of the existing CST has been addressed by a calculation that identified no adverse effects. When the interface between the safety related AF system and the CST is inoperable, supply to the AF system is maintained.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the addition of clean-up system taps to piping associated with the CST in no way affects the basis used to establish Technical Specification 3/4.7.1.3.

MINOR PLANT CHANGE M6-0-90-660

DESCRIPTION:

This modification provided for control room alarm capability at a central alarm panel (OPM01J) in the main control room for the Byron Station relay house fire protection system.

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 annunciation capability of the Byron Station relay house fire protection system in the main control room was increased. Additionally, none of the affected circuits provide safety 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 wiring changes did not affect fire detection and fire protection capability previously provided. Also, the wiring changes were not made to components or systems that provide safety functions.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the fire protection system is not addressed in the Technical Specifications. The changes were to non-Technical Specification components.



MODIFICATION M6-1/2-90-691

DESCRIPTION:

This design change replaced the disk on hydrogen monitor discharge check valves with soft seat assemblies to reduce valve seal leakage.

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 design change increases the reliability of the hydrogen monitoring system by replacing the valve seats. Additionally, the original valve vendor has provided replacement parts within the original design criteria.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because replacement of the valve seat material provides for better valve isolation capability. The operation of the equipment is not affected.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the design change provides for a more reliable valve isolation capability within original design criteria

MODIFICATION M6-0-91-005-B1

DESCRIPTION:

This modification provided the Fire Protection tie-ins to the station for the Instrument and Electrical Maintenance (IM/EM) shop facility. The modification consisted of a line tie-in from a flange at existing valve 2FP348, a suppression alarm to sound on main control room panel 2PM09J in the event of sprinkler actuation, a trouble alarm to also sound on panel 2PM09J, and associated piping, hangers and wiring required for installation. The alarm actuator was installed in the Fire Protection piping in Modification M6-0-91-005-C1. Spare Fire alarm windows were also created by relocating windows from areas where they could not be used to areas where the function of the alarm window matched the designated function of alarms for the specific area of the panel. This was done through rewiring of other panels which fed the alarms.

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 area protected by the fire alarms and sprinklers is in the IM/EM shop facility which is attached to the turbine building. This design change has no impact on equipment important to safety and does not cause equipment important to safety to malfunction. The area covered by the fire protection system is not important to safety.
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 does not adversely impact systems or functions. The change provides a tie-in for the IM/EM shop to help protect the building in the event of a fire. An alarm is activated in the control room to notify personnel of a system (sprinkler) actuation.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there are no acceptance limits or margins of safety applicable to the IM/EM area, and no equipment in the area is required to be operable.

MODIFICATION M6-0-91-005-C1

DESCRIPTION:

This modification added hose stations and overhead sprinklers to the Instrument and Electrical Maintenance (IM/EM) shop and also tied into alarm panel 2PM09J in the main control room. The modification also included several penetrations through fire walls to accommodate the fire protection piping and conduit lines.

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 are no accidents impacted due to the addition of a fire protection system to the IM/EM shop. There is no equipment important to safety in the IM/EM shop and the shop is not important to safety.
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 does not adversely impact systems or functions. The change provided sprinklers and fire hoses for the IM/EM shop to help protect the building from fire. The IM/EM shop and its fire protection system are not important to safety.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there are no acceptance limits or margins of safety applicable to the IM/EM shop, and no equipment in the area is required to be operable.

MINOR PLANT CHANGE M6-0-91-008

DESCRIPTION:

This modification installed two 15 kilowatt electric heaters in the Bottle Gas Storage Building. This change prevents the building contents from freezing during cold weather.

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 heaters are installed in a non-seismic and non-radiological plant area. This area contains no safety related structures or components. The heaters are powered from a non-safety related electrical bus.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the heaters do not provide a safety function. Also, the heaters do not interface with any safety structural systems or components.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the Bottle Gas Storage Building, heaters, and electrical source for the heaters are not discussed in the Technical Specifications.

MODIFICATION M6-2-91-016

DESCRIPTION:

A bypass line with an isolation valve was installed around demineralized water system (WM) check valve 1WM311. The modification allows operating personnel to fill the unit 2 turbine generator station water skid from the unit 1 demineralized water system after outages.

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 modification does not impact any accident as described in the UFSAR Chapter 15. The additional equipment does not affect the qualification of the turbine building or the connecting WM piping since structural and piping evaluations were performed and approved per the calculations referenced in an Engineering Change Notice. The installation of the bypass piping and isolation valve does not impact the operating characteristics of the demineralized water system or other related systems. This modification does not affect any equipment important to safety.
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 alter any system piping failure accident as described in the UFSAR Chapter 15. The WM bypass isolation valve was installed per applicable ANSI B31.1, 1973 Edition with code cases through Summer 1975 Addenda requirements. The bypass piping and manual isolation valve were evaluated and approved per calculations referenced in an Engineering Change Notice.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no margins of safety involve the demineralized water system. No Technical Specifications are affected by this design change.

MODIFICATION M6-2-91-020

DESCRIPTION:

The modification replaced motor operated valve 2CC685, reactor coolant pump thermal barrier return isolation valve. The modification was installed to increase the motor operated valve thrust window margin. The replacement valve was smaller and requires less thrust to close under design differential pressure conditions. The new motor operator was larger and provided more thrust capability.

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 valve 2CC685 is not an initiator of any accident described in the UFSAR. The new valve and motor operator perform the same functions as the original valve. The new motor operated valve increased the thrust margin and improved valve reliability. The change had no adverse impact on the Component Cooling System operation.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because valve functions remain unchanged. The small differences in valve performance characteristics were evaluated and were acceptable. No new failure modes were created.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the replacement of valve 2CC685 did not affect any parameters upon which Technical Specifications are based. The valve stroke time remains within the 10 second Technical Specification requirement.

MODIFICATION M6-1/2-91-021

DESCRIPTION:

The modification replaced the motor operators and valve yokes on valves 1/2CV8105 and 1/2CV8106 with larger operators. These valves are the containment isolation valves for the charging pumps. A sample line and valve stem leakoff line were rerouted to provide space for the larger motor operators and valve yokes. The modification was installed to increase the thrust window for margins for the valves.

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 valves 1/2CV8105 and 1/2CV8106 are not initiators of any accident described in the UFSAR. The valves' functions are unchanged with the larger operators. The larger operators increased the thrust window margin for the valves and improved valve reliability. Weight changes and increased thrust forces within the valve were evaluated and were acceptable. The changes had no adverse impact on system operation.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because functions remain unchanged. The valve weight changes, changes in thrust forces within the valve, and electrical load increase were evaluated and found acceptable. No new failure modes were created.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the valve stroke time remains below the 10 second Technical Specification requirement.

MODIFICATION M6-0-91-026

DESCRIPTION:

This modification upgraded the radwaste crane capacity from 7.5 tons to 9.3 tons, relocated the cable take-up box, lighting and surveillance cameras, and cut two notches in storage area walls. This modification allowed the station to store processed radwaste on site using the much larger liners (containers) in addition to 55-gallon drums. This upgrade was necessary because of the closing of three national burial sites and the unavailability of other sites.

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 crane, walls and all supporting structures have been evaluated and qualified for the additional loads of the crane. The design methodology was consistent with existing design and therefore, precluded any failure. Furthermore, no active plant equipment was added or affected by this modification and there was no interaction with any safety related equipment or system.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because no active plant equipment was added or modified by this modification and all applicable loads had been considered in the design and were consistent with design for existing structures.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the crane, wall and all supporting structures were considered passive structures and therefore, did not impact any sections of the Technical Specifications.



MODIFICATION M6-0-91-027

DESCRIPTION:

The modification increased reliability of the chemical feed system (CF) by replacing plastic piping with convoluted Teflon hose wrapped in 316 stainless steel braid and adding pipe supports to prevent excessive movement caused by positive displacement pumps. In addition, relief valves were added to eliminate the potential for gas buildup due to corrosion of metallic components in the system.

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 CF system has no impact on the chances for an accident occurring. The CF system does not perform a safety function. The piping changes do not affect the function of the system.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the piping changes do not change the function of the CF system or its interfaces with other systems. No new operational modes are created.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the CF system is not addressed in the basis for any Technical Specification.

MODIFICATION M6-2-91-028

DESCRIPTION:

The modification was an NRC approved pilot program that modified thirteen existing snubbers on the reactor coolant bypass subsystem. Eight snubbers were replaced with limit stop supports and five snubbers were eliminated. The modification reduced required inspections and maintenance costs as well as improved piping reliability.

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 changes to the support configuration do not change system function or operation. Piping stress is acceptable based on the results of calculations, therefore the chances of failure are not increased. The consequences of existing failure modes remain within the current safety analysis.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the support configuration changes do not affect the function or operation of the bypass piping. No new failure modes are created.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change does not affect the operation of the reactor coolant bypass piping and does not affect the basis of Technical Specifications 3/4.10 and 3/4.7.8.

MINOR PLANT CHANGE M6-1/2-91-616

DESCRIPTION:

Minor plant changes M6-1/2-91-616 installed one hour rated fire protection wrap on diesel generator oil (DO) system lines routed in redundant safe shutdown train fire areas. The fire wrap material is Kaowool Firemaster Blanket Wrap. The minor plant change responded to NRC concerns that operability of the redundant diesel generator system may be compromised in the event of a fire in any of the affected areas. The one hour fire rating was required to support the regulatory criteria delineated in the Byron/Braidwood Fire Protection Report.

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 modification restored design basis by eliminating the possibility of fire induced failure by protecting redundant trains of the DO system during loss of emergency onsite AC power capability or fire safe shutdown. In addition, seismic failure modes were evaluated because of the increased weight of the piping. Seismic design bases remain satisfied.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because no new failure modes were created by installing the one hour fire barrier. The barrier has no other function than to provide increased assurance of the separation of redundant trains of emergency onsite AC power.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the modification provides a greater degree of protection from a design basis fire. The function of the diesel generators is unaffected.

MODIFICATION M6-1/2-91-618/619

DESCRIPTION:

Drain and vent valves were added to the diesel generator jacket water cooler tube side vent and drain plugs. These valves provide a more controlled method for draining the coolers.

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 alter any function, process parameter or design basis associated with the jacket water coolers or the essential service water system. The change was designed, installed and tested to applicable codes and standards.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the valves do not affect the operation of the jacket water coolers. The change provides better control during draining and venting. System integrity is maintained.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change does not affect the operation of the essential service water system, which supplies water to the diesel generator jacket water coolers. There is no change to the amount of water or makeup capability of the ultimate heat sink.

MINOR PLANT CHANGE M6-1/2-91-716

DESCRIPTION:

This modification replaced the existing second level undervoltage protection relays for the 4000 Volt AC Safety Related Buses with tighter tolerance relays.

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 new relays provide the same function as the previously installed relays but with greater accuracy.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the replacement relays are similar in form, fit and function to the previous relays. However, the new relays are more accurate. The new relay installation did not reduce diversity, function or redundancy.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because installation of the new relays did not change Technical Specification second level undervoltage setpoint limits.

MINOR PLANT CHANGE M6-1-92-005

DESCRIPTION:

This modification abandoned in place the Product of Combustion (POC) detectors located above the radioactive waste drum storage area.

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 fire detection system is not required by the UFSAR. The changes made did not alter any system functions or components described in the UFSAR.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change did not alter any system, structure or component described in the UFSAR. Additionally, it did not alter any initial conditions, failure modes or assumptions listed in the UFSAR accident analysis.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the fire detection system is not addressed by Technical Specifications. Changes to the fire detection system did not affect any parameters upon which Technical Specifications are based.

MODIFICATION M6-1-92-014

DESCRIPTION:

This modification removed automatic deluge valves 1FP259 and 1FP260 associated trim piping and valves not required for the Diesel Generator (DG) oil storage room foam system. A 2 inch spool piece and fittings were installed to provide continuity where the automatic valves had been removed.

In response to FSAR question 280.1 the original automatic foam system was revised to require manual actuation only. This modification improved system reliability and made it simpler to operate, while maintaining the same basic flow paths and operating parameters, by removing the automatic valves and providing manual isolation (and actuation) using valves 1FP267 and 1FP269.

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 modification of the system did not add any additional combustibles to the diesel oil (DO) storage tank rooms, and the foam suppression system remains able to be actuated to provide fire protection. The foam suppression remains able to supply foam as it was prior to the modification. Therefore, the results of a fire in the DO storage tank rooms are unchanged. Removal of the deluge and associated fire protection (FP) valves improved reliability of the FP foam system by using a simpler manual valve instead of a more complex automatic deluge valve, which was manually operated.
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 of the FP foam system was unchanged. Opening of a manual valve provides foam to the DO storage tank rooms, as did the manual operation of the automatic valve. The manual valve is more reliable than the automatic deluge valve. This makes the system more reliable.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because during normal FP system operation, the fire suppression water supply system is able to transfer water via the foam system to the diesel generator fuel oil storage room. Water is obtained as described in Administrative Technical Requirement 3.7.10.1.

Administrative Technical Requirements require the foam systems in the diesel generator fuel oil storage tank room to be operable. Removal of the automatic deluge valves does not reduce system operability because the manual valves are used to actuate the system and the manual valves are more reliable than the manually actuated automatic valves.

MINOR PLANT CHANGE M6-1/2-92-030

DESCRIPTION:

This modification removed the starting interlock associated with the motor driven feedwater pump that required the recirculation valve to be open. This modification allows the motor driven feedwater pump to be rapidly started in the event of a loss of a turbine driven feedwater pump at full power.

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 motor driven feedwater pump is more readily available to prevent a steam generator lo-lo level condition. Rapid start of the feedwater pump does not impact any equipment important to safety. Consequences of an accident are not increased because the secondary heat sink continues to be maintained by the auxiliary feedwater system.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the normal feedwater pump operation is not changed. The modification prevents reactor trips by quickly supplying feedwater in the event that the turbine driven feedwater pump is unable to supply feedwater. The auxiliary feedwater system operation is unchanged.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the motor driven feedwater pump provides the same function as before the change. Removing the interlock lessens the chance for a reactor trip and, therefore, reduces the challenges to safety related equipment.



MODIFICATION M6-1-93-600

DESCRIPTION:

This modification repaired damaged upper internal fuel assembly alignment pins. Two guide pins (R-09SW and P-09SW) could not be adequately straightened and, therefore, were cut.

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 fuel assembly alignment pins do not contribute to any accident postulated in UFSAR Chapter 15. It has been determined that core geometry will be maintained during normal, upset, and faulted conditions. Additionally, restrictions on control rod locations have been presented in the analysis to prevent premature wear of any control rods. Safe shutdown of the core is assured since control rod scram (drop time) is tested to assure there is no negative impact from the postulated lateral displacement of any fuel assembly.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the remaining alignment pins at the affected fuel bundles' locations maintain core geometry under all operating conditions.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because reload core design and safety evaluations consider and bound the neutronic core penalties that could be created due to the potential for a misaligned fuel assembly at the severed pin location.

SSCR 93-011 and 93-012

DESCRIPTION:

The setpoints of 1NY-8035, 1NY-8036 adjusted the intermediate range (IR) N35 channel 20% rod stop and 25% trip setpoints required following core alterations to account for differences in core fuel assembly loading 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 these setpoints have no effect on core operations unless they are exceeded. Setpoint changes do not affect the protective function; they only change the detector current level at which that function is initiated, as addressed in UFSAR sections 7.2.1, 7.5, 7.7-1, 14.2, and 15.4.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the intermediate range rod stop and reactor trip setpoints were designed into the nuclear instrumentation system to reduce the consequences of accidents described in the SAR. Changing these setpoints does not create the possibility of an accident not evaluated in the SAR since these setpoints are a protective function and only actuate in the event of an accident.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because, with the revised intermediate range setpoints, the reactor is protected from rapid power increases. In the event of an uncontrolled power increase during a power ascension for 0% power, the revised IR setpoints that are now based on the new fuel assembly loading pattern will either stop rod withdrawal or trip the reactor, as required in Technical Specification 3/4.3.

SSCR 93-096

DESCRIPTION:

All process radiation monitoring system setpoints were revised to reflect new limits required by 10CFR20 in 1994. In addition to new 10CFR20 limits, the vent stack and wide range gas monitor setpoints were revised to reflect new Generating Station Emergency Plan Emergency Action Levels.

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 setpoints were changed in accordance with revised 10CFR20 limits to ensure the consequences of the accident are 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 UFSAR suggests revision of radiation monitoring setpoints as operating experience is gained and regulations are changed. The revised setpoints reflect current regulations.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the setpoint changes to Technical Specification radiation monitors are being made in accordance with the Bases of the Technical Specifications. The setpoints were established, as required, above normal background radiation levels for the systems and locations monitored.

DESCRIPTION:

The change lowered the main steam line (MSL) radiation monitor setpoints to enable the detection of smaller primary-to-secondary side coolant leakage.

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 change does not affect the operation or function of the MSL radiation monitors. There is no effect on the probability of a primary-to-secondary side leak occurring.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change lowers the alert and high alarm setpoints of the MSL radiation monitors. Any primary-to-secondary side leakage is detected earlier with the lower setpoint.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change allows for detection of smaller rates of primary-to-secondary side leakage.

SSCR 93-097

DESCRIPTION:

This change rescaled the reactor coolant pump (RCP) 1B Seal #1 High, Range Leakoff Flow Loop from a range of 0-6 gpm to a range of 0-10 gpm. This provides operators with leakoff flow indication above the 6 gpm maximum previously available.

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 scaling change has no effect on the probability of an accident. This is a change to a flow indication loop only and cannot cause any increase in leakoff flow. This change was implemented to reduce the probability of equipment malfunction by providing indication of flow above 6 gpm, which aids in protection of the RCP.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the combination of seal system design, alarm setpoint, abnormal operating procedure 1B0A-RCPl, new higher flow indication range, and other monitoring instrumentation provides indication/detection of abnormal seal operation prior to significant seal damage and consequential loss of coolant.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the scaling change has no effect on reactor coolant system operational leakage. Leakage continues to be monitored via all available instrumentation to ensure the Technical Specification margin of safety is not reduced.

ONSITE REVIEW 93-006

DESCRIPTION:

This onsite review evaluated the long term out of service of the chemical and volume control system (CVCS) positive displacement pumps. The Unit 1 and Unit 2 pumps were isolated from the system and testing was discontinued.

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 positive displacement pump is not required to operate in an accident. At least one of the two centrifugal charging pumps is available to provide emergency core cooling system (ECCS) high head injection when required.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the functions that the positive displacement pump is capable of supplying can also be met by either of the two CVCS centrifugal charging pumps. The operation of the CVCS centrifugal charging pumps is unaffected, therefore, the CVCS system functions as previously analyzed.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change does not affect the ability to maintain a boron injection flowpath to the reactor coolant system. Technical Specifications requires the CVCS centrifugal charging pump, rather than the CVCS positive displacement pump, as part of the ECCS.

ONSITE REVIEW 93-086

DESCRIPTION:

This onsite review evaluated changes to the frequencies of fire protection surveillances. The changes were as follows: test smoke detectors, restorable heat detectors, and fire detector circuit supervisory functions every 18 months instead of every 6 months and electrically activate electro-thermal links (ETL) every 10 years instead of every 18 months. These changes provide efficiency in maintaining fire protection systems by coordinating testing requirements.

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 to the surveillance frequencies do not affect system or component reliability. The fire protection features described in the Fire Hazards Analysis are assumed to function during a fire.
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 does not affect the functionality of any fire protection equipment. Malfunctions of fire protection equipment are not considered in accident scenarios. The risk of an undetected problem occurring during the extended surveillance period is mitigated by testing related equipment and using multiple detectors. Additionally, some of the testing does not predict or establish that the new equipment is operable, only that the replaced equipment was operable.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the affected systems are not addressed in Technical Specifications.

UFSAR DRAFT REVISION PACKAGE 4-028

DESCRIPTION:

This UFSAR change removed corporate and station specific position descriptions for personnel from Chapter 13 of the UFSAR. The change was made to eliminate the need to revise Chapter 13 when an organizational change is made.

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 affect operation of plant equipment. The change is administrative.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because station personnel continue to meet applicable standards. The position descriptions are maintained in plant procedures. Therefore, deleting the redundant description in the UFSAR has no impact on equipment or plant operation.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there is no change to the personnel requirements listed in Section 6.



MODIFICATION M6-

DESCRIPTION:

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
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because

MODIFICATION M6-

DESCRIPTION:

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
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because

MODIFICATION M6-

DESCRIPTION:

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
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because