



Commonwealth Edison  
1400 Opus Place  
Downers Grove, Illinois 60515

March 11, 1992

Dr. Thomas E. Murley, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Attn: Document Control Desk

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

Dear Dr. Murley:

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) in Enclosure 1. The report has been provided for the 1991 calendar year and consists of descriptions and safety evaluations for changes to the facility as described in the safety analysis report, and tests not described in the safety analysis report. No 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. Enclosure 2 contains a list of undefined abbreviations and acronyms used in this report.

Please direct any questions regarding this matter to this office.

Respectfully,

Terence K. Schuster  
Nuclear Licensing Administrator

Enclosures

cc: A.H. Hsia, Project Manager - NRR  
A.B. Davis - RIII  
Byron Resident Inspector

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ENCLOSURE 1

BYRON NUCLEAR POWER STATION  
ANNUAL 10 CFR 50.59 REPORT  
1991  
COMMONWEALTH EDISON COMPANY  
NRC DOCKET NO. 50-454 AND 50-455  
LICENSE NO. NPF-37 AND NPF-66

MODIFICATION M6-0-88-002

DESCRIPTION:

The modification relocated sample taps for gas sample vessel OGW01M upstream of the automatic gas analyzer on OGW01J to eliminate pressure transients at the gas analyzer's sensors.

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 operator of the automatic waste gas sampling and manual grab samples remained the same as described in the UFSAR Section 11.3.2. The relocation of the sample tape enhanced the reliability of the automatic gas analyzing system.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created. Cause this modification did not alter the operation of the gas analyzing loop in the Waste Gas system. The reliability of the gas analyzing system has been enhanced to prevent high back pressures on the analyzer during grab sampling.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the performance of the automatic gas analyzing system, which is required to be operable per Technical Specification 3.3.3.10, was enhanced. It does not alter the ability to grab sample per Tech Spec 3/4.11.

## MODIFICATION M6-1-88-36-B1

### DESCRIPTION:

M6-1-88-36-B1 was the final partial modification to modification M6-1-88-36. The purpose of M6-1-88-36 was to modify the reactor coolant crossover leg piping to allow draining of the reactor coolant from a low point in order to minimize radiation exposure during outages when the steam generator requires maintenance and testing. Modification M6-1-88-36-B1 installed the modification completely on the 1A, 1C and 1D reactor coolant loops. The 1B RC loop was completed previously under the A1 partial.

### 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 previous design limits on valve and vessel nozzles are met, or have been qualified as per acceptable ASME Code allowables in accordance with the UFSAR 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 leakage from the 3/4" drain will be small and manageable within the small break LOCA analysis.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the new piping arrangement meets the previous design limit.

MODIFICATION M6-0-88-107

DESCRIPTION:

This modification provided a flow path from the tendon tunnel sumps discharge to the regeneration waste drain tank inlet header. During normal conditions, the tendon tunnel sump discharge is 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 routes the discharge of the tendon tunnel sumps to the regeneration waste drain tank. This allows 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 consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because the routing of tendon tunnel sump pump discharge is not a factor in any accident scenario analyzed in the UFSAR. Additional piping of sump discharge to the regeneration waste drain tank does not impact any safety or important to safety system.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because an additional flow path from tendon tunnel sump pump discharge to the regeneration waste drain tank does not affect any safety systems or structures. The new piping does not reduce the effectiveness of any system, structure, or component necessary for safe shutdown of the reactor.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because tendon tunnel sump pump discharge, regeneration waste drain tank input, and Turbine Building Floor Drain system components are not addressed in the Technical Specifications.

## MODIFICATION M6-1-89-024

### DESCRIPTION:

The modification deleted the autoclosure interlock (ACI) function on the Residual Heat Removal (RHR) suction isolation valves, 1RH8702A/B and 1RH8702A/B. In place of the ACI function, an alarm was provided on the main control board.

### 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 RHR suction relief valves are used as a means of cold overpressure protection. The cold overpressure protection system is designed to ensure the limits of Appendix G to 10CFR50 are not exceeded when one or more of the RCS cold legs is less than or equal to 350°F. Transient analyses were performed to determine the worst case mass input and heat input events per UFSAR, Section 5.2.2.11.2. Removal of the ACI did not impact the transient analyses. However, removal of the ACI helps ensure that the RHR suction relief valves are available to mitigate potential overpressure transients. Additionally, removing the ACI reduced the potential for inadvertent isolation of the RHR system which could have caused a Low Temperature Overpressure (LTOP) transient (reduced letdown combined with a loss of decay heat removal) while also isolating an overpressure mitigation path. Removal of the ACI has a positive impact on LTOP mitigation, thereby reducing the probability of an occurrence of an accident.

Analyses were also performed to confirm that an RHR relief valve has the capability of maintaining the RHR system maximum pressure within code limits in UFSAR, Section 5.4.7.2.3. Removal of the ACI does not affect this analyses. Should a peak pressure occur while the RHR system pressure RHR system would be mitigated by the RHR suction relief valves. The deletion of the ACI feature has no effect on the ability of the RHR system to survive pressure transients when the RHR system is connected to the RCS, since the RHR suction isolation valves are slow acting and no credit is taken for their actuation.

The impact of removal of the ACI to Event V, LOCA outside containment, frequency was also considered. The dominant failure mode is rupture of the valve disc in each of the two series motor-operated valves (MOVs) in the RHR suction line when closed during normal power operation. This failure mode is independent of the ACI. Another less influential contributor to Event V frequency was found to be rupture of one valve while the other valve has failed open. The results demonstrated that, in this case, removal of the ACI is beneficial when compared to retaining it.

MODIFICATION M6-1-89-024 (Con't)

SAFETY EVALUATION SUMMARY: (Con't)

1. Analyses were performed to determine the impact of removal of the ACI on RHR system unavailability. The analyses indicate that the reliability of the RHR system is unchanged during RHR initiation and that it improved during short and long term cooling. The ACI becomes more of a detrimental factor as the length of time in which RHR is required to operate increases. Removal of the ACI reduces the probability of malfunction of 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 the effect of an overpressure transient has not changed due to the removal of the ACI. The RHR suction relief valves were designed to maintain the RHR system pressure within design limits. Although the ACI isolated the RCS from the RHR suction relief valves on high RCS pressure, overpressure protection of the RHR system is provided by the RHR suction relief valves not by the slow acting suction isolation valves. The purpose of the interlocks is to assure double isolation between the RHR system and the RCS when the plant is at normal operating conditions. The interlock prevents the possibility of an Event V due to operator error.

Analyses were performed to demonstrate the impact of removal of the ACI on Event V frequency, RHR system reliability and overpressure transients. The analyses performed compared the results with and without the ACI. However, the results were contingent upon providing a alarm to alert the operator that a RCS-RHR series suction isolation valve(s) is not fully closed and that double isolation is not being maintained. The modification did not impact the opening circuitry, nor did it effect the MOV position indication in the control room. The setpoint for the alarm is within the range of the open permissive setpoint pressure and the RHR system design pressure minus the RHR pump head pressure. Operating procedures were revised to direct the operator to take the necessary actions to close the open valve (if it is not closed), or if this is not possible, to return to the safe shutdown mode of operation. The analyses performed indicated an overall increase in safety due to the removal of the ACI, implementation of the modification, and procedural changes.

3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because deletion of the ACI had no effect on the ability of the RHR system to survive pressure transients when the RHR system is connected to the RCS, since the RHR suction isolation valves are slow acting and no credit is taken for their actuation. However, removal of the ACI helps ensure that the RHR suction relief valves are available to mitigate potential overpressure transients. Additionally, removal of the ACI improved RHR system reliability, increasing the margin of safety.

MODIFICATION M6-1/2-89-029-N1

DESCRIPTION:

The modification replaced the Kerotest accumulator fill line isolation valves and associated piping between the subject valves and the accumulators. The new valves were supplied by Anchor Darling. It was determined that post cracking of fill lines had occurred due to vibration caused by backflow (slicing) through the Kerotest valves. The Anchor Darling valves were not diaphragm operated and therefore, no vibration was created during backflow through these 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 new valves and piping allow operation of accumulators per UFSAR Section 6.3. Valves were qualified for use in 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 replacement parts installed were qualified for use and do not change the original design conditions.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because Tech Spec 3/4.5.1 requires all accumulators operable in modes 1, 2, and 3. Replacement of valves and associated piping was performed in mode 6 and cracking of the accumulator fill lines due to vibration caused by slicing, which could result in a loss of ECCS is not longer a concern.



## MODIFICATION M6-1-89-030

### DESCRIPTION:

The modification provided an audible alarm to enhance the two redundant low-low level status lamps that were used for the level of NaOH solution in the containment spray additive tank by connecting an annunciator point/window to those tank level type switches. Additionally, the spray additive tank window alarms were arranged into descending priority positions on the main control board (MCB) to address human factors.

### 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 was for low energy electrical circuitry which had no involvement with reactor coolant boundaries and did not have any potential for creating a LOCA or for increasing its consequences. The work was for the containment spray (CS) system and the new alarm setpoint was identical to the existing status lamp. The installation did not increase the probability for failure of CS system 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 analysis of failure modes and effects proved the modification was not subject to nor created any single failure event that could disable the design basis accident indication for containment spray additive tank depletion to the low-low level or the operation of CS system.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the modification provided more positive indication for the discharge of NaOH solution from a new audible alarm as opposed to low-low status lamps on the MCB.

MODIFICATION M6-1-89-032

DESCRIPTION:

This modification upgraded the existing Residual Heat Removal (RHR) heat exchanger outlet temperature instrument loop to safety related and added indication in the main control board (MCB).

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 modification upgraded the existing RHR heat exchanger outlet temperature loop and added indication in the MCB. Appropriate isolators were installed to segregate safety from non-safety components and an analysis was performed to insure the seismic integrity of the equipment. No new accident or failure modes were identified, or existing ones altered, that have not been previously analyzed.
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 upgraded the existing RHR heat exchanger outlet temperature loop and added indication to the MCB. The appropriate isolators were installed and an analysis was performed to ensure system and component integrity. No new accident or failure modes were identified.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the new indication added to the MCB allows the operator to monitor RHR system temperature from the control room. This allows the operator to take the appropriate action upon recognizing a temperature deviation, which in effect increases the margin of safety due to early detection of the deviation.

MODIFICATION M6-1-89-035

DESCRIPTION:

This modification revised the solid state protection system to provide automatic isolation of steam generator blowdown isolation valves on low-low steam generator level. It also revised the safeguards test cabinet circuits to allow on line testing of the new isolation function.

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 probability of decrease in secondary cooling events is unchanged and consequences of such events are reduced since automatic closure of the steam generator blowdown valves preserves steam generator inventory. The probability & consequences of failure of the reactor protection system due to seismic effects is unchanged.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because redundant trains of reactor protection system are utilized to actuate redundant solenoids on the isolation valves. The effects of a steam generator sample line failure without isolation of the corresponding isolation valve and the effects of continuous sampling from all steam generators during auxiliary feedwater events have been evaluated.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because automatic isolation of steam generator blowdown ensures that auxiliary feedwater can provide sufficient heat sink to cool down the reactor coolant system as discussed in the basis for Technical Specifications. Containment isolation function of blowdown valves is unchanged. Mitigation of accident and transient conditions is enhanced by preservation of steam generator inventory during auxiliary feedwater events.

MODIFICATION M6-0-89-037

DESCRIPTION:

The modification redirected floor drains within the release tank enclosed area from the turbine building floor drain to the auxiliary building floor drain system via a 2" line (OTE70AB-2"). This modification also added a sample sink in the release tank area to facilitate release tank sampling.

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 flowpath of the drain is not considered in any accident analyzed in Chapter 15.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because rerouting the drain provides additional monitoring and processing options of contaminated water. No new failure effects were 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 because radioactive effluent limits in Technical Specification 3/4.11.1 are maintained.

MODIFICATION M6-0-89-038A

DESCRIPTION:

The partial modification installed a 1" sample line from 401' elevation to 369' elevation in the Turbine Bldg. The partial modification supports a modification to redirect the Essential Service Water System (SX) sampling to an instrument skid located at 369' elevation. A future partial modification will incorporate the final electrical and mechanical tie-ins.

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 non-safety sample line, Class D does not impact the SX system as referenced in subsections 7.3.1.1.7, 9.2.1.2.5, or 9.2.1. Sampling can be maintained manually during initial tie-ins. The Essential Service Water System operability is not impacted by the partial modification.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because SX sampling is not impacted. Manual sampling can be accomplished during SX sampling out of service. The tie into the SX system can be isolated and does not increase the potential for a malfunction.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the non-safety sample line does not change the design basis for any Technical Specifications, specifically Tech Spec 3/4.7.4.

MODIFICATION M6-1/2-89-039

DESCRIPTION:

This modification rerouted the steam jet air ejector after condenser through the loop seal and tied inter condenser drains to the main condenser. It also routed off-gas drains to main condenser.

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 gas drain piping is not considered in any UFSAR 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 modification does not impact any safety related systems or structures. No new failure effects have been determined to exist as a result of these modifications.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because none of the systems, structures, and components altered in this modification is the basis for any Technical Specification.

MODIFICATION M6-2-89-040

DESCRIPTION:

This modification provided routing to direct drain line 2WE98AB-2" to the Unit 2 Auxiliary Building floor drain sump. This prevented leakage of equipment drains in auxiliary building via opened drain line 2WE98AB-2".

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 modification did not impact any safety-related systems. The piping has been seismically qualified and no interaction exists with adjacent components. There was no contribution to any accident 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 modification provided routing to direct drain line 2WE98AB-2" to the Unit 2 Auxiliary Building floor drain sump. As a result of this no new failure effects had been determined to exist.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the routing of the drain line is not the basis for any Technical Specification.

MODIFICATION M6-1-89-044

DESCRIPTION:

This modification added automatic isolation capability to the upper Steam Generator Blowdown (SD) lines after a High Energy Line Break (HELB). The modification utilized existing temperature sensors that provided HELB isolation for the lower SD lines. The HELB auto isolation feature allows usage of the upper SD lines for SD flow above 15 gpm per steam generator for Unit 1.

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 modification does not affect the function of the steam generator blowdown. Therefore, the accidents described in the UFSAR remain unchanged.
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 accident or malfunctions evaluated in the UFSAR that are affected by the modification. The reliability of the steam generator blowdown system is expected to improve by sharing the blowdown between lower and upper lines. No new failures were created. Isolation following a HELB ensures that area EQ temperature limits are not exceeded.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this modification does not affect the function of the steam generator blowdown system. It is not addressed in the basis for any Technical Specification.



MODIFICATION M6-1-89-671

DESCRIPTION:

This minor change added blind flanges and steel pipe caps after cutting SX strainer drain lines downstream of their associated manual isolation 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 this minor change adds only passive piping blind flanges and pipe caps which do not alter the function of the Essential Service Water Strainers or their drain lines. The non-safety related WE drain lines have no impact on accidents described in UFSAR section 15.
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, Table 3.2-1 describes the equipment drain (WE) system as non-safety related; Table 3.6-1 does not identify WE as a system important to plant safety, and Table 3.6-2 does not identify WE as a high or moderate energy system. Therefore, the addition of these blind flanges and pipe caps added to the WE piping does not create accidents not previously analyzed in the UFSAR section 15.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the addition of the low energy, passive blind flanges and pipe caps does not change the function of the WE drain lines from the SX strainers, nor does it affect the WE system as described in Tech Spec section 11.2.2.2.1. This minor change isolates the current SX strainer drain flow path of non-contaminated water to the liquid radwaste system, while allowing strainer drainage for maintenance reasons, as necessary.

MODIFICATION M6-1-89-676 & M6-1-90-721

DESCRIPTION:

The modifications provided line-stop fittings and blind flanges on the SX strainer backwash drain 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 the operation of the SX system as described in the UFSAR is not altered.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the system operation remains the same and no new failures are introduced.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this change does not affect the bases of Technical Specification 3/4.7.5 since operational parameters of the system are not altered.

MODIFICATION M6-0-90-007

DESCRIPTION:

This modification installed a sight glass in pipe OWE88A downstream of valve OGW9307. This allowed operators to open the gas decay tank drain valves (OGW9305 A-F) to determine if there is any water present in the gas decay tanks and to verify that any water present in tanks has been drained before reclosing the drain 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 the pipe OWE88A is classified as non-safety related and does not interact with equipment important to safety. It does not affect any accident analyzed in the UFSAR.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the installed sight glass in pipe OWE88A aids operators in determining water accumulation in drain lines. The system flow path remains the same, therefore, the operation of the system is unchanged.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because installation of this sight glass in pipe OWE88A does not affect the basis for any Technical Specification.

MODIFICATION M6-0-90-10A1

DESCRIPTION:

The modification replaced the Robertshaw Vibra switches on the essential service water cooling tower fan gear box with an IRD model.

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 replaces an existing Vibra switch. The function of the system does not change. Additionally, the system is not required to respond to 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 this change upgrades the system that performs the same function. No new failures are introduced.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the vibration monitor is not addressed in Tech Specs.

MODIFICATION M6-1-90-011

DESCRIPTION:

This modification added two pressure gauges and a flow orifice and gauge to the Essential Service (SX) booster pump piping. The instruments allow for the collection of pump performance data and trending of parameters. The SX Booster pump is driven by the Auxiliary Feedwater diesel.

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 piping and valves installed by the modification are designed and supported to meet seismic requirements as described in the UFSAR. The additional equipment does not prevent the AF or SX systems from performing their designed function.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the additional piping, valves and instrumentation are designed in accordance with existing SX system safety clarifications. The new valves and instrumentation for the AF diesel driven SX booster pump do not alter the safety function of the AF system.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the intended safety functions of the AF diesel AF pump and SX system are not affected by this modification. SX flow to the SX booster pump is adequate to meet the requirements of cooling for the AF diesel.

MODIFICATION M6-1-90-012

DESCRIPTION:

This modification replaced the smoke detectors above the Unit 1 Reactor Coolant Pumps (RCP) Fire Detection Zones 1D-2, 1D-3, 1D-4, and 1D-5 with 225° F heat detectors. Also, one extra heat detector was added to Zone 1D-5 (RCPD) to provide extra fire detection for the pressurizer area. The heat detectors have a longer life span in high radiation areas than the smoke detectors did.

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 RCP Fire Detection System only provides an alarm. This system does not initiate an automatic fire suppression system. The RCP Fire Detection System is not required to reduce the consequences of an accident or malfunction of equipment involving the reactor coolant system. This system operates as described in Fire Protection Report Sections 2.3.1.1 and 2.3.1.2.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the RCP Fire Detection System functions as originally designed per Fire Protection Report Sections 2.3.1.1 and 2.3.1.2 a fire in the RCP area causes a fire alarm in the Control Room. A failed detector causes a trouble alarm in the Control Room.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the the heat detectors provide the same level of fire protection for the RCP's as the smoke detectors did. Therefore, the margin of safety as defined in Administrative Technical Requirement 3/4.3.3 is not affected.

MODIFICATION M6-1-90-013

DESCRIPTION:

This modification provided the capability to manually vent the reactor vessel head. Previously, venting was provided by solenoid operated vent valves. If power was discontinued (Mode 5 & 6), or in the unlikely event, lost, venting of the reactor vessel was not possible. This modification allows venting to occur under those circumstances.

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 design criteria, and are no more probable of a malfunction than any other small bore valves in the RC system. A malfunction of the manual operated vent valves (leaking) would be bounded by the small break LOCA analysis where a small break LOCA has been determined to be of no consequences to public exposure to offsite radiation per UFSAR 15.6.5.4.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the addition of the manual operated vent valves is bounded by the small break LOCA analysis. No new accident scenarios are created.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because all changes to the parameters or conditions used to establish the Technical Specification requirements are in a conservative direction. Tech Spec 3/4.4.11 requires that the solenoid operated vent path be operable in Modes 1, 2, 3, and 4. Addition of a manual operated vent path, which could be used only in Modes 5 & 6, does not affect solenoid valves/path operation.

MODIFICATION M6-0-90-014

DESCRIPTION:

The modification installed piping and valves to allow chilled water to flow through station heat coil in the machine shop air handling unit for cooling during the summer months.

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 affected equipment is not addressed 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 modification does not affect any equipment associated with an accident. No new failures are created.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the modified systems are not addressed in the basis for any Technical Specification.



MODIFICATION M6-0-90-018-A1 through F1

DESCRIPTION:

The modifications installed an automatic door operator on doors D420, SD171, SD170, D427, SD169, and SD175 to reduce the number of door alarms due to the doors being left open.

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 doors function in the same manner with or without the modification. The modifications are to assist people; it does not alter the security, fire rating, or safety of the doors.
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 doors is not changed.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because although not directly addressed in Tech Specs, the modifications do not affect the safety of the plant since the door operates in the same manner with or without the operator energized.

MODIFICATION M6-1-90-021

DESCRIPTION:

This modification replaced the existing opposite division powered D.C. Operated "Fail As Left" solenoid operated valve in each train of the H<sub>2</sub> monitoring system with a D.C. operated "Fail Open" solenoid operated valve. With the new configuration in place, a loss of power in one ESF division would not leave a failed closed valve in the opposite division would H<sub>2</sub> monitoring train. Completion of this modification satisfied a NRC commitment.

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 equipment has no function in an accident other than containment isolation. This function has not changed and the probability of the accident has 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 modified valves would fail open upon a loss of a D.C. ESF bus which is different than previously assumed. The containment isolation would still be maintained through the other valve in series. This configuration has been evaluated by NRC and found acceptable.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because valve will still provide containment isolation function in the event of a loss of one division of D.C. ESF power containment isolation is maintained and hydrogen monitoring is still achievable.

MODIFICATION M6-0-90-668

DESCRIPTION:

The modification added a threaded union to the piping downstream of relief valve OCO034 in order to facilitate maintenance on this valve. This relief valve is associated with the carbon dioxide (CO<sub>2</sub>) tank (OCO02T) located at the River Screen House.

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 addition of the threaded union downstream of relief valve OCO034 does not degrade the operability of the CO<sub>2</sub> System at the River Screen House. The setting of the relief valve has not been changed. Furthermore, the operation of any plant safety related system was not impacted. The CO<sub>2</sub> system functions as described in Fire Protection Report sections 2.3.18.25, 2.3.18.26, and 2.3.18.
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 RSH CO<sub>2</sub> System is the same as originally designed as described in Fire Protection Report sections 2.3.18.25, 2.3.18.26, and 2.3.18.27. (The Fire Protection Report is incorporated in the UFSAR by reference).
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change did not reduce the level of fire protection at the River Screen House. The margin of safety as defined in Administrative Technical Requirement 3/4.7.10.3 is not affected.

MODIFICATION M6-1/2-90-684

DESCRIPTION:

The modification installed a raised floor in the Unit 1 and 2 Plant Process Computer (PPC) room to allow cables to be routed and to provide proper airflow.

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 Appendix E of the UFSAR mentions the Process Computer, but it is not specifically addressed in any section. The PPC is not assumed in any 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 installation of the raised floor does not affect the functionality or operability of the Plant Process Computer or any safety related equipment.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the Plant Process Computer is not assumed in any basis for any Technical Specification. The raised floor does not affect the Plant Process Computer or any safety related equipment.

MODIFICATION M6-0-90-626

DESCRIPTION:

The modification lengthened the fire protection sprinkler header pipe nipples to the sprinkler heads in the operator briefing room (Turbine Building 451' G/18) so that the entire sprinkler head is below the suspended ceiling.

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 no safety related equipment is located in the area of the Operator Briefing Room. No new equipment has been added. The sprinkler heads were lengthened below the suspended ceiling tiles.
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 fire protection system has not been changed. Sprinkler head performance has been increased by lowering them below the ceiling. The added weight of the longer nipples is negligible.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because these sprinklers are not addressed in Tech Specs. The Limiting Conditions for Operation as identified in the Byron Administrative Technical Requirements are not affected.

MODIFICATION M6-0-90-707

DESCRIPTION:

The modification removed valve OFP774B and installed a new style of valve. It also changed relief valve OFP775B model 218-1 to new model 218-KP.

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 protection system function as described in the Fire Protection Report, does not change. The Fire Protection Report is incorporated into the UFSAR by reference.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because replacing the check valve and relief valve did not alter the operation of the fire protection water supply system. By replacing a chronically damaged valve with a more reliable design, the fire protection water supply system has been made more reliable.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the Byron fire protection implementation program are not altered. Plant systems addressed in Tech Specs or Administrative Technical Requirements are not affected.

MODIFICATION M6-1/2-91-001

DESCRIPTION:

The modification installed a jumper to inhibit the close-intercept-valve (CIV) function of the digital electrical hydraulic control system. CIV was intended to fast-close the turbine intercept valves in the event of a steam flow/generator load mismatch. Because the intercept valves at Byron do not have past closing capability, CIV function was unable to operate per design. This modification was installed to prevent spurious intercept valve closures caused by CIV activation.

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 turbine overspeed protection trips are not affected by removal of the CIV function. Chapter 15 accident analysis does not take credit for the CIV function. Both trains of independent/redundant overspeed trip remain unaffected and operable.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because removal of the CIV function does not affect operation of the turbine, generator, or overspeed protection trip. With CIV inhibited, a steam pressure/generator load mismatch can, at worst, cause a 108% overspeed, at which point the overspeed trip system causes closure of all steam inlet valves, preventing excessive overspeed.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no margin of safety involves the CIV function. Technical Specification 3/4.3.4, turbine overspeed protection, is not affected by inhibition of the CIV function

MODIFICATION M6-0-91-003

DESCRIPTION:

The modification replaced a freon based decontamination unit with a water based abrasive unit. This eliminated the mixed waste generated by the existing machine and eliminated the need for freon in accordance with corporate and government goals.

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 decontamination unit is not addressed in the UFSAR. No accident analysis sections discuss this component.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the decon unit adds combustible materials to fire area 11-2-0 of the Auxiliary building. The total increase in fire load is approximately 2% and has been analyzed and found to be acceptable.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the decontamination unit is not addressed in the basis for any Technical Specification.



MODIFICATION M6-1-91-622

DESCRIPTION:

The modification provided connections to Essential Service Water System (SX) lines for the Reactor Containment Fan Coolers to provide capability for backwash.

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 SX system and minor change to the system has been designed to Category I criteria. Thus, the seismic design is not changed. In event of train fails, adequate redundancies exist to precluded loss of safety function.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this change does not affect the operation of the system or any other systems in all modes and operation.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the connections or backwash capability is not the basis for any Technical Specification.

MODIFICATION M6-1-91-633

DESCRIPTION:

The modification removed the Unit 1 blowdown condenser secondary vent (1SD50A-3/4) because it was originally installed without adequate support, therefore, it was not seismically qualified.

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 ensures that the integrity of the blowdown condenser and the room the blowdown condenser is housed in is maintained so the previous accident analyses are still valid.
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 pipe 1SD50A-3/4 and the associated valve does not create new types of failures, system operation is unaffected.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this pipe and associated valve are not described in the basis for any Technical Specification.

#### MODIFICATION M6-1-91-686

##### DESCRIPTION:

This minor change was designed to reduce erosion and corrosion problem on the moisture separator reheater cold reheat drain lines near the main condenser. As previously installed, the lines were carbon steel and were routed with several direction changes prior to entering the main condenser. This configuration had led to significant damage to pipes and fittings including a number of leaks on these lines. The new design rerouted the lines to eliminate bends and replaced a portion of carbon steel pipe and fittings with stainless steel.

##### 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 function of the affected extraction steam piping is not changed. Interfaces with the main condenser are not impacted. The events resulting from a loss of condenser vacuum are unchanged.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the use of erosion resistance material and rerouting the lines to eliminate bends reduces the chances of steam leakage from these lines. The interfaces with the other systems is unaffected.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change increases the reliability of Extraction steam system. Technical Specifications do not address Extraction Steam system.

DESCRIPTION:

Steam generator narrow range level transmitters 1LT-0517, 1LT-0518, 1LT-0519, 1LT-0527, 1LT-0528, 1LT-0529, 1LT-0537, 1LT-0538, 1LT-0539, 1LT-0547, 1LT-0548, 1LT-0549, 1LT-0556, 1LT-0557, 1LT-0558 and 1LT-0559 were rescaled from 227.85-64.85 inches water column to 224.09-57.41 inches water column. This reduced overall error to actual design requirements. This change was required to correct design miscalculations, correct for  $T_{hot}$  main steam pressure, and reduce overall system control error to within  $\pm 5\%$  as assumed in certain accidents. The overall system error was  $\pm 6.6\%$ ,  $\pm 9.5\%$ .

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 steam generator level transmitters still function as designed in protection of turbine on high-high level trip and provide adequate heat sink to core on low-low level. The steam generator integrity is not affected. All equipment reactor protection setpoints are unchanged. The feedwater pump trip (high-high) will occur at a level 4 inches higher, however, this trip is still bounded by 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 rescaling will bring the steam generator level transmitter and associated setpoints more into the center of the UFSAR boundaries. This will return the steam generator level to its intended and actual scaling requirements and associated safety-related setpoints.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the parameters used to establish the Technical Specification requirements are unchanged. Therefore no Technical Specifications are impacted and no reduction in margin of safety exists.

**DESCRIPTION:**

The setpoint of temperature switches OTS-SX090, OTS-SX091, OTS-SX092, and OTS-SX093 was changed to 70°F from the previous value of 78°F. This setpoint was determined by the ultimate heat sink design basis reconciliation task force. Essential Service Water (SX) return water is required to flow through the risers in order to provide adequate cooling. The study was based on initial wet bulb temperature of 78°F, thus it is required that SX return water flows through the risers rather than going through the bypass 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 the change would close the bypass valves earlier when water temperature reaches 70°F. Adequate cooling water to SX heat loads is still ensured. The bypass valves will still open when water temperature drops below 50°F to prevent freezing of the tower.
2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the SX return water is required to flow through the risers when wet bulb temperature is 78°F. This is to ensure the tower performs adequately to cool SX water during design basis accidents.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the bypass setpoints are not addressed in the Tech Specs. The change closes the bypass valves at the correct water temperature to provide adequate cooling to SX when an accident occurs.

**DESCRIPTION:**

The setpoints of INY-8035, INY-8036 adjusted intermediate range (IR) N35 channel 20% rod stop, and 75% trip setpoints required during refueling. Revised setpoints are required during refueling 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 from 0% power, the revised IR setpoints that are now based on the new fuel assembly loading pattern are either stop rod withdrawal or trip the reactor, as required in Tech Spec. 3/4.3.



**DESCRIPTION:**

The SSCRs changed pressurizer safety injection setpoints of instrument loops 1RY-0455, 1RY-0456, 1RY-0457, and 1RY-0458 from 1850 psig to 1829 psig. The changes were based on setpoint reconciliation program, which evaluated actual plant tolerances and test equipment errors and determined that the setpoint is within the safety analysis unit.

**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 ensures a safety injection occurs at the proper setpoint. Due to concerns arising from instrument measuring equipment accuracy, the setpoint was raised to 1850 psig. Following the setpoint reconciliation program study, the instrument measuring equipment tolerances were verified and specified to ensure the 1829 psig setpoint was within the safety analysis limits.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the setpoint change is based on the results of the setpoint reconciliation program. The new measurement and test equipment (MT&E) values ensure the safety injection occurs within the safety analysis limits for safety injection.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this change to the setpoint is consistent with the Technical Specification value in Table 3.3-4. The setpoint reconciliation program has validated this setpoint based on new MT&E used to calibrate the instrument loops.

DESCRIPTION:

Temperature loops IRC-0411, 421, 431, and 441 were rescaled to change full power delta temperature value from 57.02°F to 58.70°F. Delta temperature was also rescaled to reflect new measured values derived from the performance of BVS XPT-15. The use of the measured delta temperature values ensures accurate trip setpoints for over temperature delta temperature and overpower delta temperature as well as accurate loop delta temperature indications.

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 rescaling the delta temperature loops based on surveillance measurements have no direct interaction with the probabilities of occurrence of the accident. The consequences of the accident are unchanged from those analyzed in the UFSAR since rescaling delta temperature ensures bounded trips and initiation of mitigation. Rescaling the delta temperature loops preserves the function of the delta temperature indications and associated delta temperature mitigation. The consequences of a malfunction of equipment important to safety are not increased since overpower delta temperature and overtemperature delta temperature trips perform as designed and analyzed.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the rescaled delta temperature loops do not adversely impact system functions. The function of the delta temperature limiting safety system setpoints is preserved as designed and analyzed in the UFSAR.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the safety features extracted from the delta temperature loop signals function as intended and assumed in Technical Specification 3/4.3.



## PROCEDURE BFP FH-20

### DESCRIPTION:

The procedure allows use of a secondary restraint on the fuel building crane to meet the single failure proof guidelines in NUREG-0612 and 0554. This allows the 125 Ton load block (hook) to remain on the crane during all phases of fuel handling activities.

### 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 restriction in section 15.7 to keep loads from travelling over the spent fuel storage area is maintained. This prevents objects from dropping on spent fuel.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the secondary restraint is passive and there is no effect on plant operation. If a single failure were to occur, the secondary restraint would be built to ensure no acceleration forces are possible. No new failures are created because single failure proof guidelines in NUREG-0612 are used.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the limits in Technical Specification 3/4.9.7. are maintained. The secondary restraint meets the single failure proof criteria, thus the load block is no longer classified as a load or heavy load and is allowed over the spent fuel pool. The bases for Technical Specification 3/4.9.7 are unchanged.

DESCRIPTION:

The UFSAR was revised to allow the new fuel elevator to be used for moving objects other than new fuel assemblies, including irradiated fuel assemblies.

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 minimum shielding distance specified remains the same. Irradiated assemblies are inherently less reactive than new ones for which the elevator is already designed. A failure involving a dropped fuel assembly is bounded by existing analyses.
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 addresses protective measures to handle uncontrolled upward movement of an irradiated assembly. Other postulated failures are bounded by the analyses of a fuel handling accident in Section 15.7.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the new fuel elevator is not addressed in the basis for any Technical Specification.

DESCRIPTION:

This procedure governed performance of a 24 hour test of the Economic Generation Control System with the RCS TAVG operating deadband expanded to  $\pm 4^{\circ}\text{F}$  rather than the normal deadband of  $\pm 1.5^{\circ}\text{F}$ .

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 range of operating temperatures allowed during the execution of this test is explicitly bounded by the existing UFSAR safety analyses. No other change to equipment or operating procedure is encompassed.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because all equipment and operational strategies remain unchanged with the exception of the temperature deadband for TAVG. Plant equipment is designed and qualified to operate over a wide range of temperatures, and the increased range allowed will not go beyond existing limits.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because no Technical Specification is impacted during the performance of this procedure.

## UFSAR Operator Action Procedures

### DESCRIPTION:

Section 15.0 of the UFSAR was revised to reflect revision 1A of the Westinghouse Owners Group emergency procedures. The operator actions were summarized for certain events.

### 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 do not affect the accident analyses in chapter 15. There is no change in plant operation. The revision provides clarification of Westinghouse Owners Group procedure guidance.
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 provides a description of station procedures used as additional requirements for operator action. Operator action is still from approved station procedures, which undergo a 10CFR50.59 safety evaluation prior to use.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change does not affect the basis for any Technical Specification.

## Reactor Trip and ESF Actuation System Testing

### DESCRIPTION:

Clarifying information was added to sections 7.1 and 7.3 of the UFSAR to more completely describe testing the reactor trip and engineered safety features actuation 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 there are no changes to plant operation or testing requirements or methods. Any failure of the system to maintain valve position has been analyzed previously.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because maintaining the valves in a closed position is assumed in the basis for the analysis and that the Technical Specification requirements are initially satisfied. No new failures are introduced.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the valves remain in their safeguarded actuated condition listed in LCO 3.6.1.7. The Technical Specification manual initiation surveillance requirement for trip actuating device operational tests for phase A, phase B, and manual safety injection is consistent with LCO 3.6.1.7. Because of this, there are no interactions or adverse effects.

## MSSV Setpoint Out of Tolerance

### DESCRIPTION:

Safety Evaluation SECL 91-391, prepared by Westinghouse, addresses the impact of Main Steam Safety Valve (MSSV) set-pressure drift outside the permitted values given in the Technical Specifications on past operations.

### 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 MSSVs are an accident mitigator and can therefore not increase the probability of an accident. Since Peak Cladding Temperature and other criteria were met, there is no increase in LOCA consequences. All applicable non-LOCA criteria are met as well.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the only accident different than already analyzed would be a small break LOCA with steam generator secondary shell failure leading to a loss of auxiliary feedwater flow. Since a small break LOCA cannot lift the highest set pressure MSSV, there is no concern for steam generator secondary shell failure. No other equipment important to safety is impacted by operation of out of tolerance MSSVs.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the calculated Peak Cladding Temperature remains under the NRC acceptance limit of 2200°F listed in the Bases for the LOCA peaking factor.

## Enclosure 2

### Undefined Abbreviations Utilized In the Annual Report

AF	-	Auxiliary Feedwater
BFP	-	Byron Fuel Handling Procedure
EGC	-	Economical Generation Control
FP	-	Fire Protection and Detection System
GW	-	Waste Gas System
HY	-	Hydrogen System
RC	-	Reactor Coolant
RHR	-	Residual Heat Removal
RY	-	Pressurizer System
SD	-	Steam Generator Blowdown System
SSCR	-	Setpoint Scaling Change Request
SPP	-	Special Procedure
TAVG	-	Average RC Temperature
TE	-	Turbine Building Equipment Drain System
WE	-	Auxiliary Building Equipment Drain System