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March 15, 1993

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). This report is being provided for the 1992 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.

Respectfully,

Joseph A. Bauer  
Nuclear Licensing Administrator

Enclosures

cc: J.B. Hickman, Byron Project Manager-NRR  
A.B. Davis, Regional Administrator-RIII  
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BYRON NUCLEAR POWER STATION  
ANNUAL 10 CFR 50.59 REPORT  
1992  
COMMONWEALTH EDISON COMPANY  
NRC DOCKET NO. 50-454 AND 50-455  
LICENSE NO. NPF-37 AND NPF-66

MODIFICATION M6-Q-86-173A1

DESCRIPTION:

This modification replaced high/low delta pressure alarms across Fuel Handling Building Charcoal Booster Fans OVA04CA/B with flow control alarms. The high/low delta pressure signals did not provide as accurate an indication of flow as desired.

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 Handling Building Ventilation System performs the same function after the modification was installed. Providing high/low flow alarms vs. high/low delta pressure alarms still provides an associated trouble alarm in the Main Control Room.
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 high/low flow alarms in place of high/low delta pressure alarms in the Main Control Room does not alter the function of the Fuel Handling Building Ventilation System, change the flow rate through the system, or change inputs which control fan or damper function.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the flow rate of 21,000 cfm +/- 10% is not altered. The new flow alarms provide an alarm annunciation in the Main Control Room. Fan function or damper position is not affected, therefore, there is no effect on the flow.

MODIFICATION M6-2-87-168

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 set points to their original 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 will still be available 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. (Tech Spec Table 3.3-4).

MODIFICATION M6-1/2-88-030-B1

DESCRIPTION:

Fire Detection Panels 1PA39J, 2PA39J, 1PA49J, and 2PA49J were provided with battery backup power supplies and local battery alarms as part of Modification M6-1/2-88-030-A1. Modification M6-1/2-88-080-B1 added remote battery alarms in the Main Control Room for the Panels. The Control Room alarms consist of six alarm lights on panels 1PM09J and 2PM09J, an SER computer point, and a connection to a previously existing Unit 1 and Unit 2 Fire System trouble alarm on panel OPM01J.

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 change the operation of fire detection or suppression systems providing fire protection to safety related equipment. This modification only added alarm lights in the main control room for the battery backups associated with panels 1PA39J, 1PA49J, 2PA39J, and 2PA49J.
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 systems has not changed. This modification only added battery backup alarms to the main control room.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the alarms are not addressed in the Technical Specifications. The modification only added battery backup alarm lights to the control room. The function of the fire protection system has not changed; therefore, the level of fire protection in safety related areas is not affected.

MODIFICATION M6-O-88-069

DESCRIPTION:

This modification installed the tie-in of fire protection and AC power feeds for the new 401' elevation access facility to the auxiliary building located in the west side of Unit 2 turbine building.

SAFETY EVALUATION SUMMARY:

1. The probability of an occurrence or the consequence of an accident, or malfunction of equipment important to safety as previously evaluated in the UFSAR is not increased because this modification does not impact the safety related design basis or affect equipment important to plant safety. The access facility is in the turbine building and is connected to non-safety related equipment.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because this modification only ties in systems which are not required for the safe shutdown of the plant. The extension of the fire protection system has been reviewed and is acceptable according to the UFSAR.
3. The margin of safety, as defined in the basis for any Technical Specification is not reduced because the systems that are affected are not addressed in the Technical Specifications.

MODIFICATION M6-1/2-89-029-C1

DESCRIPTION:

The modification replaced the existing Kerotest Pressurizer Spray Bypass valves. These valves were of the packless metal diaphragm type. This type of valve has been prone to stem and body leakage. The new KSB valves are instrument globe valves judged to be less vulnerable to 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 new valves have essentially the same fit, form and function as the original valves.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because the new valves installed were seismically 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 these valves are not addressed in any Technical Specification.



MODIFICATION M5-0-89-038B1

DESCRIPTION:

The partial modification incorporates final electrical and mechanical tie-ins for an essential service water (SX) chemistry sampling skid.

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 related sample line, Class D does not impact the SX system as referenced in subsections 7.3.1.1.7, 9.2.1. or 9.2.1.2.5.
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 an 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 M6-2-90-012

DESCRIPTION:

This modification replaced the smoke detectors above the Unit 2 Reactor Coolant Pumps (RCP) Fire Detection Zones 2D-2, 2D-3, 2D-4, and 2D-5 with 225° F heat detectors. Also, one extra heat detector was added to Zone 2D-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 M6-1/2-90-17

**DESCRIPTION:**

This modification abandoned in place, temperature switches 1TS-VD054 in the 1A Diesel generator (DG) room, 1TS-VD064 in the 1B DG Room, 2TS-VD054 in the 2A DG Room and 2TS-VD064 in the 2B DG Room. These temperature switches were used for DG Room low air temperature alarms. Since these switches are located in the HVAC plenum area and not in the DG Rooms themselves, the switches were giving misleading alarms. During cold weather, it was possible for the HVAC plenum area to drop below the pre-modification setpoint of 40°F, while the DG Rooms themselves were still at about 75°F. The modification rewired the DG Room low air temperature alarms to spare contacts on temperature switches 1TS-VD051 in the 1A DG Room, 1TS-VD061 in the 1B DG Room, 2TS-VD051 in the 2A DG room, and 2TS-VD061 in the 2B DG room. The modification also changed the low air temperature setpoint to 60°F. Switches 1/2TS-VD051 and 1/2TS-VD061 are located in the DG Rooms, not in the HVAC plenum areas, so these switches will give more accurate indication of a DG Room low air temperature.

**SAFETY EVALUATION REPORT:**

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 DG Room low air temperature alarm is not interlocked with any circuitry that could prevent the diesel generator or its associated ventilation fan from starting and running if 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 function of the DG Room low air temperature alarm has not changed. The location of the temperature switch previously initiated the low air temperature alarm; this change improves the accuracy of the alarm by providing representative room temperatures and not intake plenum temperatures.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the Technical Specification DG Room high temperature limit is not affected. No Technical Specification applies to the DG Room low temperature limit. Moving the DG Room low temperature alarm setpoint from 40°F to 60°F is conservative.

MODIFICATION M5-2-90-021

DESCRIPTION:

This modification replaced the existing opposite division powered D.C. Operated "Fail As Left" solenoid operated valve in each train of the Hydrogen (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 H<sub>2</sub> monitoring train. Completion of this modification satisfied NRC commitment involving a difference between the previous design and the design as specified in the original safety evaluation and UFSAR.

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 for accidents, the UFSAR assures that all containment isolation valves close and remain closed throughout and after the accident unless manually re-opened.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the valves are required to close on phase A containment isolation and remain closed. This condition still exists unless a D.C. ESF bus fails, which would cause one of the two containment isolation valves in series to fail open. Containment integrity is maintained by the other valve.

## MODIFICATION M6-2-90-023

### DESCRIPTION:

This modification replaced the process sampling (PS) sample cooling components on PS skid 2PS18A with a Sentry designed cooling water mixing system that uses chilled water (WO) as the cooling medium. The original PS cooling water skids did not maintain the proper sample temperatures necessary for consistent accuracy in chemical analyses and personnel safety.

### 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 did not affect any accident scenario described in the UFSAR. This modification replaced portions of the original non-safety related PS sample cooling water skids, 2PS18A, with Sentry designed cooling water mixing skid. All piping installation was in accordance with ANSI B31.1, 1973 Edition, thereby not increasing the probability of any piping failure accidents.
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 did not alter any accident scenario as described in UFSAR Section 15. The replacement portions of sample cooling water skid 2PS18A are installed per applicable ANSI B31.1, 1973 Edition with code cases through summer 1975 addenda requirements. Sample cooling water skid interactions with the instrument air, make-up demineralizer and WO systems are insignificant.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the cooling skid is not addressed in any Technical Specification.

MODIFICATION M6-1-90-023-A1/B1

DESCRIPTION:

This modification replaced OPS17A, steam generator blowdown sample cooling water skid, and 1PS18A Process Sample Cooling Water Skid with Sentry designed cooling water isolation system using chilled water (WO) as the cooling medium. The original Process Sampling (PS) sample cooling water skids did not maintain the proper sample temperatures necessary for consistent accuracy in chemical analyses and personnel safety.

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 did not affect any accident scenario described in the UFSAR. The replacement portions of the original PS sampling cooling skid do not impact the operating characteristics of the PS system or other related sampling system. Cooling water flow rates of about 60 gpm at 76°F to the sample coolers are ensured by redundant booster pumps on each skid.
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 accident scenario as described in the UFSAR Section 15. The replacement portions of sample cooling water skids OPS17A and OPS1A are installed per applicable ANSI B31.1. The replacement supports have been seismically evaluated per the calculations referenced in Engineering Change Notice (ECN) No. 06-00243M for OPS178 and 06-00242M for 1PS18A. Sample cooling water skid interactions with the instrument air, makeup demineralizer, and WO systems are insignificant.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the cooling skids are not addressed in any Technical Specification.

MODIFICATION M6-2-90-025

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 as necessary. 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 impact on the changes 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 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 remains the same. The effect of cleanup loop taps on the integrity of the existing CST has been addressed by a Sargent & Lundy calculation. No adverse effects were identified. The interface between the safety related AF system and the CST is unchanged. System alignment during cleanup will not result in the CST being 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 taps to piping associated with the CST is no way affects the basis used to establish Technical Specification 3/4.7.1.3.



MODIFICATION M6-1-90-027

DESCRIPTION:

This modification deleted containment sump discharge check valve, 1RF048. This was done to permit the return of high radiation sample system (HRSS) sample effluents to the containment floor drain sump, if necessary. Check valve 1RF054 is now the anti-cross contamination valve between the Unit 1 and 2 containment flowpaths (auxiliary building equipment drain tanks).

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 was not increased because the Unit 1 reactor floor drain (RF) sump and its associated piping and components upstream of containment isolation valve 1RF026 and Area 5 piping downstream of 1RF027 are classified as non-safety related. This modification did not impact any accidents as described in UFSAR chapter 15.0.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR was not created because this modification affected only non-safety related portions of the RF piping, check valves and fittings were seismically evaluated to preclude damage to safety related equipment. The RF Sump discharge can be isolated from the auxiliary building equipment drain tanks and the HRSS from fail close isolation valves 1RF026 and/or 1RF027.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this modification did not impact the ability to perform HRSS reactor coolant system chemistry surveillances as defined in Technical Specification 3/4.4.7 and 3/4.4.8.



MODIFICATION M6-2-90-027-B1

DESCRIPTION:

This modification deleted containment sump discharge check valve 2RF048. This was done to permit the return of high radiation sample system (HRSS) sample effluents to the containment floor drain sump if necessary. Check valve 2RF054 is now the anti-cross contamination valve between the Unit 1 and Unit 2 containment sumps. This modification does not impact normal HRSS sample effluent flowpaths (auxiliary building equipment drain tanks).

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 was not increased because the Unit 2 reactor floor drain (RF sump and its associated piping and components upstream of containment isolation valve 2RF026 and Area 7 piping downstream of 2RF027 are classified as non-safety related. This modification did not impact any accidents as described in UFSAR chapter 15.0.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR was not created because this modification affected only non-safety related portions of the RF piping. Check valves and fittings were seismically evaluated to preclude damage to safety related equipment. The RF Sump discharge can be isolated from the auxiliary building equipment drain tanks and the HRSS from fail close isolation valves 2RF026 and/or 2RF027.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because this modification did not impact the ability to perform HRSS reactor coolant system chemistry surveillances as defined in Technical Specifications 3/4.4.7 and 3/4.4.8.

MODIFICATION M5-0-90-033

DESCRIPTION:

This modification installed a 2" duplex strainer in the makeup demineralizer room acid tank fill line OAC46A-2, to prevent rubber hose particles from being deposited into tank OAC01T.

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 were not increased because the operation of the acid feed and handling system does not affect any previously evaluated accidents or malfunctions.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR was not created because the systems that use the acid operate in the same manner as previously evaluated. The strainer filters out foreign matter to ensure the acid handling equipment operates as designed.
3. The margin of safety, as defined in the basis for any Technical Specification, was not reduced because the duplex strainer function and acid system are not addressed in any Technical Specification.

MODIFICATION M6-1-90-681

DESCRIPTION:

The modification installed raised face flanges on 1W001CB waterbox drainline piping to expedite piping removal during future maintenance activities and eliminate the need for cutting and rewelding of pipes when removal is required.

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 containment chillers are not used as the basis or initiating factor in evaluated accidents. Containment chillers are not required to be operable during or following 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 flanges are installed in the drain piping past the waterbox isolation valves. The water box is isolated during normal operation and all piping and flanges have had seismic evaluation and installation. The possibility of an unevaluated accident is unchanged.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because there are no Technical Specifications applicable to the containment chillers.

MODIFICATION M5-2-90-597

DESCRIPTION:

This minor change installed baffles on selected fire protection sprinkler heads in the Unit 2 turbine building. Prior to the installation of this minor change, some sprinkler heads did not meet the separation criteria in NFPA 13. In the event of a fire, the baffles will prevent sprinklers that have been activated from wetting the non-activated sprinklers and delaying their operation.

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 baffles do not interfere with the operation of the sprinkler heads. Also, the added weight of the baffles has been analyzed and pipe supports have been added as 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 function of the turbine building fire protection sprinkler system has not changed.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the Unit 2 turbine building sprinkler system is not addressed in any Technical Specifications. Furthermore, the function of the sprinkler system has not changed.

MODIFICATION M6-0-91-005A1

DESCRIPTION:

This modification installed various non-safety related system tie-ins required for the new Instrument and Electrical Maintenance (IM/EM) Building. Specific installation modifications included:

1. changes to the storm sewer system that collects rain water from the turbine building roof,
2. a 2 inch connection to an existing 4 inch cold water line to provide the IM/EM Building with potable water,
3. a 6 inch connection to an existing 6 inch turbine building floor drain header to accommodate draining the collection sumps in the IM/EM Building,
4. changes to the station air and instrument air systems for use by the maintenance departments,
5. removal of a yard light and installation of new yard light,
6. addition of a grounding cable that ties into the grounding cable for the turbine building and service building,
7. disconnecting motor control cables to a window that has been covered over by the IM/EM Building,
8. removal of circuits and associated outlets, boxes, and conduits to allow IM/EM Building construction, and
9. cutting and plugging of three conduits in the former IM Shop that are no longer needed.

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 equipment associated with this modification is neither important to safety nor associated with equipment which is important to safety. Additionally, the equipment associated with this modification is not discussed in the UFSAR accident analysis.

MODIFICATION M6-0-91-005A1

Safety Evaluation Summary  
(continued)

The Station Air and Instrument Air systems were used by the maintenance departments in their former shop locations, therefore the new tie-ins reflect a location of system connections, not the addition of system loads. Any failure of the Instrument air system to safety related valves would cause the valves to go to their fail-safe position, which is a previously evaluated event.

2. The possibility of an accident or malfunction of a different type than any previously evaluated in the UFSAR is NOT created because the equipment associated with this modification performs the same function in a new location. There is no change to plant operation.
3. The margin of safety, as defined in the basis for any Technical Specifications, is NOT reduced because the equipment associated with this modification is not discussed in any Technical Specification.

MODIFICATION M6-0-91-23-A1 and B1

DESCRIPTION:

These modifications deleted all equipment installed in the acid pump house with the exception of lighting (LL), HVAC system (VH), and poll boxes 1JB088X and 1JB180X. The equipment is no longer in use.

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 specific equipment is not addressed in the UFSAR. The UFSAR only addresses the fact that chemical feed occurs. Other systems are in place to provide chemical feed functions. Removal of abandoned equipment does not affect accident probability or consequences.
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 occur from removal of abandoned equipment.
3. The margin of safety, as designed in the basis for any Technical Specification, is not reduced because this abandoned equipment is not used in the basis for any Technical Specification.



MODIFICATION M6-0-91-697

DESCRIPTION:

This minor change removed the louvers in the access panels for the compressor for the turbine building carbon dioxide (CO<sub>2</sub>) tank. The louvers were replaced with screens. This change improved the airflow to the compressor and its associated motor, thereby minimizing trips on thermal overloads due to elevated compressor compartment temperatures.

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 minor change only affected the louvers in the compressor compartment access panels. The compressor compartment access panels are passive components that cannot initiate nor prevent the initiation of the CO<sub>2</sub> 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 function of the carbon dioxide system has not changed. The minor change only altered the compressor compartment access panels.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the minor change did not affect the CO<sub>2</sub> discharge initiation signals, nor did the minor change alter the quantity of CO<sub>2</sub> that would be discharged in a fire situation. The minor change only replaced the louvers in the compressor compartment access panels with screens to improve air flow and cooling for the compressor motor.

MODIFICATION M6-1-92-001

DESCRIPTION:

Modification M6-1-92-001 removed the main steam sample probes and replaced them with caps to maintain system boundary pressure. The decision was made to install this modification after the weld failed on the 1D probe causing a steam leak. The other three probes were also removed as a precautionary measure.

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 main steam sample probes do not mitigate an accident and cannot be used to predict steam generator tube failure. Removal of the probes therefore does not increase the probability of an accident, nor the consequences of an accident. This modification was installed because of probe failure; therefore removal of these probes decreases the probability of a steam leak.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because if a cap weld were to fail the result would be a small steam leak, which is within the bounds of present UFSAR accident analysis. Furthermore, with the caps in place, the chances of a steam leak at the probe location has been reduced.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the changes of the modification have no impact on the requirements or bases of the Technical Specifications.

**DESCRIPTION:**

The setpoints of PR43A-427-B1410A, PR43C-427-B1410C, PR42A-427-B1420A, PR42C-427-B1420C, PR40A-427-B2410A, PR40C-427-B2410C, PR38A-427-B2420A and PR38C-427-B2420C, (4KV Bus degraded voltage relays) were increased to ensure all 430/120 VAC loads are operable. A procedure was revised to allow performance in all modes, add test equipment for degraded voltage relay, add requirements to install jumpers to trip channels, and provide steps to functionally test relays after calibration.

**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 increasing the setpoint was in the conservative direction. The jumper is installed as required by Technical Specifications. The probability of a malfunction of equipment important to safety was reduced by the changes.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the UFSAR is not created because raising the degraded voltage setpoint was in the conservative direction. Use of the jumper to provide a trip during relay calibration is in accordance with Technical Specification 3.3.2 and Table 3.3-4. The relay test verifies correct operation after calibration. The test verifies the relays perform their required function with a 2/2 logic as designed.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because increasing the setpoint is in the conservative direction. Use of the jumper is required by Technical Specification. The relay test verifies 2/2 actuation logic to verify correct operation after calibration.

**DESCRIPTION:**

The setpoints of ZNY-8035 and ZNY-8036 were adjusted for intermediate range (IR) N35 and N36 channel 20% rod stop, and 25% trip setpoints as 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 setpoint of 1NY-8036 adjusted intermediate range (IR) N36 channel 20% rod stop, and 25% trip setpoints required during refueling. Revised setpoints are required during refueling to account for differences in core fuel assembly loading patterns. The 1NY-8035 did not require adjustment.

**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 UFSAR. Changing these setpoints does not create the possibility of an accident not evaluated in the SAR, 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.

## UFSAR PROCEDURAL CHANGE

UFSAR DEP 3-031

### DESCRIPTION:

This UFSAR change involves making the spent fuel pool boron concentration limit of 2000 ppm a recommended concentration and setting 1500 ppm as the new minimum concentration. This is for consistency with an engineering evaluation for the high density spent fuel racks. This study showed that 300 ppm is the minimum concentration required. Setting 1500 ppm as the limit provides additional margin and operational flexibility.

### 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 updated Final Safety Analysis Report is not increased because the limit of 1500 ppm exceeds the analyzed limit of 300 ppm.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the updated Final Safety Analysis Report is not created because the limit of 1500 ppm exceeds the analyzed limit of 300 ppm.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change has no impact to the requirements or bases of the Technical Specifications.



## UFSAR PROCEDURAL CHANGE

UFSAR DRP 4-005

### DESCRIPTION:

This UFSAR change involves eliminating the out-of-service requirements which removes power from valve 1/2VQ003. This is for consistency with NUREG-0737 and NUREG-0800 and with similar valves 1/2VQ004A/B and 1/2VQ005A/B/C. The 1/2VQ003 valve is a containment isolation valve which isolates the flowpath to the containant Post-LOCA Purge 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 updated Final Safety Analysis Report is not increased because the change does not affect the safety features of the valve, and the valve will continue to close on a containment isolation signal, and fail closed on a loss of air/power.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the updated Final Safety Analysis Report is not created because the valve will continue to operate as designed.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change has no impact to the requirements or bases of the Technical Specifications.



## UFSAR PROCEDURAL CHANGE

UFSAR DRP 4-013

### DESCRIPTION:

This UFSAR change involves changing the lineup of the nitrogen cylinders from normally open to normally isolated. This is to provide a backup supply for the low pressure portion of the nitrogen 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 updated Final Safety Analysis Report is not increased because the nitrogen system is not used to mitigate the consequences of any accident.
2. The possibility for an accident or malfunction or of different type than any previously evaluated in the updated Final Safety Analysis Report is not created because the change will increase the amount of nitrogen available if the low pressure supply were to run low. The nitrogen system does not affect initial (assumed) conditions for any analyzed accident, nor could the change result in a malfunction of systems or components served by nitrogen so as to create another accident.
3. The margin of safety, as defined in the basis for any Technical Specification, is not reduced because the change has no impact on the requirements or bases of the Technical Specifications.

## STATION PROCEDURE REVISION

BEP 1260-1 REVISION 7

### DESCRIPTION:

This station procedure revision involves changing the calibration frequency of certain health physics instrumentation from quarterly to semiannually. This is for consistency with ANSI N323-1978.

### 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 Final Safety Analysis Report is not increased because the change has no impact to the accidents discussed in the UFSAR.
2. The possibility for an accident or malfunction of a different type than any previously evaluated in the Final Safety Analysis Report is not created because the health physics equipment, should it fail or malfunction, would not affect plant equipment or operations.
3. The margin of safety, as defined in the basis for an Technical Specification, is not reduced because the change has no impact on the requirements or bases of the Technical Specifications.