

Special Process Procedures (SPP)

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Safety Evaluation Summary Form

Tracking No. 6G-99-0003
Activity No. SPP 98-082

DESCRIPTION:

The proposed activity performs a differential pressure stroke test of 1SI8807B in the open and closed direction while acquiring diagnostic test data. This activity verifies proper operation of the valve under design basis conditions.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The test will be performed during plant conditions (Mode 6 or defueled) when the emergency core cooling system (ECCS) is not required to be operable. The ECCS will not be operated outside of the parameters it would experience during an accident. The probability of a malfunction will not increase. The test will ensure proper operation of this valve under conditions it would experience during an accident. The consequences of a malfunction will not increase. The valve will be verified to be operable prior to required operability of the ECCS and no new failure modes will be introduced.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

This procedure will verify proper operation of 1SI8807B in both the open and closed directions. The thrust values measured during the differential pressure and flow test will ensure the valve will operate during an accident. This test will verify the valve will operate to close or open under design basis conditions. The performance of this test will not affected the ability of the residual heat removal (RH) system to provide shutdown cooling flow and to maintain required refueling cavity water level. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The performance of this test will not affected the ability of the residual heat removal (RH) system to provide shutdown cooling flow and to maintain required refueling cavity water level. ECCS is not required to be operable in the plant conditions this test will be performed. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0034Activity No. SPP 99-001DESCRIPTION:

The proposed activity provides the steps necessary to downpower and reenergize auxiliary electric equipment room protection and control cabinets during refueling outage B1R09.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The temporary loss of the instruments and controls as identified in the procedure do not, in themselves, factor into any initiating event for UFSAR accidents and consequently, do not increase the probability of occurrence for previously evaluated accidents. Systems affected by the loss of indications/controls are not operated beyond normal operating characteristics designed for the systems. Manual indications/controls are also available in various systems to compensate for the loss of instrumentation. The procedure provides proper guidance to operators in regards to availability of indications and controls.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed maintenance activity does not adversely affect the required operable residual heat removal (RH) system, low temperature overpressure protection (LTOP), ultimate heat sink, or essential service water (SX) makeup system when executed as described within the safety analysis. No new failure modes are created. The affected systems will be operated within normal parameters. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The proposed activity will result in the temporary loss of the controls and indication as described in the procedure. Individual cabinet outages will result in the loss of train specific instrument and control functions associated with the RH system and LTOP pressure relief capability. Sufficient redundancy will be maintained to meet the Technical Specification requirements for these systems and are called out in the procedure for the use by the operators. The proposed activity will cause temporary loss of the SX cooling tower (SXCT) basin level indication and control room control of deep well and circulating water makeup to the SXCT. If required,

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Tracking No. 6G-99-0034

Activity No. SPP 99-001

planned manual action will be used to makeup and control SXCT basin levels. Use of manual control in accident conditions has already been included in the design basis makeup analysis.

Safety Evaluation Summary Form

Tracking No. 6G-99-0049
Activity No. SPP 99-024

DESCRIPTION:

The purpose of this procedure is to provide guidance for investigating the effect on vibration levels for various changes to the essential service water (SX) makeup pumps. The changes covered in this procedure include cold vertical offset of the engine and gear unit shafts, temporary horizontal bracing of the gear unit, temporary installation of a dynamic absorber on the gear unit, and temporary weight addition to a coupling guard. The results of the testing will be analyzed and recommendations will be made for permanent installation of suitable hardware to resolve elevated vibration.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The function of the SX makeup pumps will not be changed by the proposed activity. All temporary changes will be removed at the completion of testing. The procedure provides guidance to minimize the time the pump is operated with a test configuration that results in vibration levels at or above the inservice testing acceptance criteria limit. The pump will be available and will be supplying flow to the SX cooling tower basins during the performance of the procedure. Failure of one SX makeup pump is assumed in the ultimate heat sink design basis. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The testing performed within the procedure will not degrade the performance of the SX makeup pumps. The test device configuration will be changed promptly if any vibration levels reach the inservice testing acceptance criteria limit. The testing will occur within the SX makeup pump operability constraints of Technical Specification section 3.7.9. Full operability of the SX makeup pumps will be demonstrated following completion of the procedure. The pump will be available and will be supplying flow to the SX cooling tower basins during the performance of the procedure. Failure of one makeup pump is assumed in the ultimate heat sink design basis. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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Tracking No. 6G-99-0049
Activity No. SPP 99-024

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

The testing will occur within the SX makeup pump operability constraints of Technical Specification section 3.7.9. Full operability of the SX makeup pumps will be demonstrated following completion of the procedure. The pump will be available and will be supplying flow to the SX cooling tower basins during the performance of the procedure. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

Safety Evaluation Summary Form

Tracking No. 6H-99-0008
Activity No. SPP 98-063

DESCRIPTION:

The proposed activity performs informational seat leakage tests on emergency core cooling check (ECCS) valves to identify potentially leaking valves for repair during refueling outage B1R09. This procedure will be performed in Mode 3.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

Installed test line piping will be used to provide a leakage path to identify potentially leaking valves. Accumulator pressure on the upstream side of the check valves will force any leakage to the hold up tank through the test lines. The leakrate will then be measured as a decrease in accumulator level as recorded by a strip chart recorder connected to the accumulator level channels. The procedure provides guidance to closely monitor accumulator level changes to ensure the accumulators remain within required ranges. The amount of time the vent paths are allowed to be open is limited by Technical Specification requirements. The procedure will close valves 1SI8835, 1SI8809A, and 1SI8809B in accordance with the test exception allowed by the Technical Specifications. Therefore, one residual heat removal (RH) train is always available for injection into two cold legs in accordance with the test exemption. The test pressures utilized by the proposed activity are within the design pressure of the affected piping. No other safety systems or equipment are affected by the performance of the proposed activity. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased by the performance of the proposed activity.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

Operation of the ECCS will remain within the requirements of the Technical Specifications. All affected components will remain operable for any ECCS actuation within the bounds of Technical Specification action statements. Plant operation is maintained within design bases. The ECCS check valve testing will identify potentially leaking valves for repair during the upcoming refueling outage and no new failure modes are introduced. The possibility of a new accident or transient or the possibility of a new malfunction of equipment important to safety is not created by the performance of the proposed activity.

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

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Tracking No. 6H-99-0008
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The proposed activity ensures operations are performed within the requirements of the Technical Specifications. The amount of time the vent paths are allowed to be open is limited by Technical Specification requirements. The procedure will close valves 1SI8835, 1SI8809A, and 1SI8809B in accordance with the test exception allowed by the Technical Specifications. Therefore, one RH train is always available for injection into two cold legs in accordance with the test exemption. Based on the adherence to Technical Specification requirements, the margin of safety is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0064
Activity No. SPP 98-081

DESCRIPTION:

The proposed activity will verify proper operation of valve 1RH8716A (1A RH Heat Exchanger outlet isolation valve) in both the open and closed directions under design differential pressure and flow conditions. The activity will be performed in Mode 4, Mode 5, Mode 6 or defueled.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The proposed activity will test the valve under conditions it would be expected to operate under during an accident condition. Alternate flowpaths will be provided during the test to ensure pumps are protected and the pumps/system will not be operated outside of parameters the pumps/systems would operate under during an accident. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed activity verifies the valve will open and close against differential flow and pressure conditions which is a normal function of the valve. The valve will be tested under conditions normally expected during accident conditions. The affected pumps/systems will be operated and maintained operable in accordance with the Technical Specifications. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The affected pumps/systems will be operated and maintained operable in accordance with the Technical Specifications; therefore, there is no reduction in the margin of safety.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0071
Activity No. SPP 98-083

DESCRIPTION:

The proposed activity will verify proper operation of the component cooling (CC) water reactor coolant pump (RCP) thermal barrier flow indicating switch installed in DCP 9600415. The proposed activity will also verify proper operation of flow switch interlocks associated with valve 1CC685, proper operation of valve 1CC685, and proper operation of alarms associated with the new flow indicating switch.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The proposed activity will be performed during Modes 5, 6, or defueled, at which time the CC system is not required to be operable. The proposed activity will verify that the replacement of the flow indicating switches has not adversely affected the CC system operation when needed to support plant operation. The performance of the proposed activity does not impair any system, structure, or component (SSC) which is relied upon to mitigate the consequences of an accident. The proposed activity will verify the design function of equipment important to safety and no new failure modes will be introduced. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The overall operation of the CC system will be as directed in normal operating procedures. The loss of CC flow to the RCP thermal barrier is an analyzed transient; therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The proposed activity does not affect any parameters upon which the Technical Specifications are based; therefore, there is no reduction in the margin of safety.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0072
Activity No. SPP 98-084

DESCRIPTION:

The proposed activity will verify proper operation of the component cooling (CC) water low discharge header automatic start time delay installed in DCP 9600413. The proposed activity verifies the low discharge header pump automatic start feature operates properly and verifies automatic start signals and associated alarms function properly during low pressure conditions and during restoration of header pressure.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The component cooling water system will be operated as directed in normal operating procedures and a simulated low-pressure condition will be generated. The low-pressure signal is within the design basis for component cooling. Only one of the two trains of component cooling is required for the system to perform its normal and post-accident function and one train of CC will be unaffected during the conduct of the test. Starting the standby CC pump on a simulated low pressure signal is equivalent to normal practice in swapping CC pumps. Based on the above, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the SAR is not increased as a result of the activity.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The component cooling water system design, functions, and operation remain unaffected by the performance of the activity. Overall system configuration will be controlled by existing plant operating procedures. CC pump operation will be within normal operating bands. Activation of the pressure switch will start the standby pump creating system conditions very similar to normal system pump swaps. Based on the above, the possibility for an accident or malfunction of a different type than any evaluated previously in the SAR is not created as a result of the activity.

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

The activity is performed within the requirements of the Technical Specifications. Therefore, the margin of safety is not reduced as a result of this activity.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0095
Activity No. SPP 99-009

DESCRIPTION:

The proposed activity will provide guidance for the installation and removal of temporary modifications (air jumpers) required to provide temporary station air (SA) to instrument air (IA) dryers during work performed on the 0IA0147, 0IA0148, and 1SA113 valves and for repair of line 1IA33A-4".

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The installation of the temporary modifications will not change the function or the operation of the IA dryers. The IA system will remain capable of providing dry oil-free compressed air for both essential and non-essential components and instrumentation. The temporary hoses and connections are designed to be equivalent to system piping. Therefore, the probability of a loss of IA due to a hose/fitting failure is not increased over that of a system piping failure. A failure of the IA system will not prevent safety-related components from performing as required since the components are designed for a fail-safe mode on loss of IA. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report (SAR) is not increased as a result of the activity.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The IA system design, function, and operation remain unaffected by the performance of the activity. Overall system configuration will be controlled by the temporary modification and the installation procedure. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the SAR is not created as a result of the activity.

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

The IA system is not addressed in the Technical Specifications. Therefore, the margin of safety is not reduced as a result of this activity.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0105
Activity No. SPP 99-012

DESCRIPTION:

The proposed activity is the verification of correct operation of the 2B Diesel Generator starting air dryer(s) installed under DCP 9600047.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

One of two redundant air receivers remains pressurized to greater than 175 psig so diesel generator operability is maintained during the test. No analyzed accidents were identified as applicable to this test. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

Operability of the diesel generators is maintained during the test and no permanent physical plant changes are made during the test. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The modification does not change Technical Specification Bases parameters. The proposed change, as written, does not introduce any new operational limitations for the affected engine subsystems nor does it challenge the availability of the diesel generators. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

Safety Evaluation Summary Form

Tracking No. 6H-99-0123
Activity No. SPP 99-016 and SPP 99-017

DESCRIPTION:

The purpose of SPP 99-016 and SPP 99-017 is to collect data in order to perform a comparison between the installed feedwater flow elements (venturies) and the newly installed AMAG ultrasonic flow meters.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

This activity will record plant operational data only. This activity will verify the new AMAG ultrasonic flowmeters are operating satisfactorily. There are no changes being made in the way the plant is being operated. Therefore, the probability of occurrence or consequence of an accident is unchanged.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

This activity will record plant operational data only. No changes are being made in the venturi tube tap specific constants or transmitters during this activity. If any changes to the constants are required based on the data collected, those changes will be done under a separate design change process. There are no changes being made during this activity in the way the plant is being operated. Therefore, the probability of an accident or malfunction of a different type is unchanged.

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

Main feedwater flow is used in the determination of calorimetric power which is used for calibration of the power range instrumentation. This activity will record plant operational data, but will not change the venturi tap constants or the determination of calorimetric power; therefore, the margin of safety assumed in Technical Specifications and the UFSAR remain unchanged.

Safety Evaluation Summary Form

Tracking No. 6H-99-0151

Activity No. SPP 99-022 Temporary Procedure Change

DESCRIPTION:

The proposed activity revises SPP 99-022 to monitor air system test pressure using a different gauge location. The original gauge selected was not available to support the test.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The use of a different gauge location does not affect the test procedure since the new gauge is still within the same pressure boundary. Therefore, the proposed change does not increase the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The use of a different gauge location does not affect the test procedure since the new gauge is still within the same pressure boundary. Therefore, the proposed change does not create the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report.

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

The use of a different gauge location does not affect the test procedure since the new gauge is still within the same pressure boundary. Additionally, the generator stator cooling system is not addressed in the Technical Specifications. Therefore, there is no impact on the margin of safety, as defined in the basis for any Technical Specification.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0181

Activity No. SPP 98-083

DESCRIPTION:

The proposed activity revises SPP 98-083 to correct a procedure reference in step 7.3 (BOP CC-17 should be BOP CC-T2).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The proposed activity revises an incorrect reference to a procedure and does not change or alter any other steps that have been previously evaluated. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed activity revises an incorrect reference to a procedure and does not change or alter any other steps that have been previously evaluated. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The proposed activity revises an incorrect reference to a procedure and does not change or alter any other steps that have been previously evaluated. Therefore, the margin of safety for any Technical Specification is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0182Activity No. SPP 98-073 Temporary Procedure ChangeDESCRIPTION:

The proposed activity revises SPP 98-073 (adjustment of Unit 1 pressurizer spray bypass valves) to allow performance of the procedure in Modes 2 and in Mode 1 up to 30% power (versus Mode 3) and to allow reduced instrumentation monitoring since this data was obtained in a previous execution of the procedure. The proposed changes allow more flexibility in scheduling and shorten the test duration.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The proposed activity revises the modes the procedure can be performed and the collection of test data to allow flexibility in scheduling and to shorten the test duration. Appropriate operating system lineups and guidance is provided in the procedure to address reactor coolant system pressure and temperature changes in the revised performance modes and radiological precautions are included in the procedure to address dose concerns. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed activity revises the modes the procedure can be performed and the collection of test data to allow flexibility in scheduling and to shorten the test duration. Appropriate operating system lineups and guidance is provided in the procedure to address reactor coolant system pressure and temperature changes in the revised performance modes and radiological precautions are included in the procedure to address dose concerns. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

Pressurizer spray bypass valves are not addressed in the Technical Specifications; therefore, the margin of safety for any Technical Specification is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0202Activity No. SPP 99-015 Temporary Procedure ChangeDESCRIPTION:

This proposed activity involves a temporary change to SPP 99-015 to correct the NWT vendor skid valve alignment. During the dry run of the procedure, it was discovered that the incorrect valve lineup for injection was specified. The specified alignment would not allow injection. In addition, the valves isolated to prevent overflow to the hotwell will be changed to 1CD142 and 1CD145 to utilize valves that are already closed on Attachment 2, page 2. Step F.3.19; the original hotwell level does not need to be raised to 42 inches for the dry run. Deleting this step will not impact the successful completion of the actual test with the tracer.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The injection of the Sodium-24 tracer does not raise the off-site dose release. A calculation was performed by Health Physics in which the whole quantity (0.5 curies) of sodium was released. The maximum dose received was bounded by 10CFR50 Appendix I and 40 CFR190 dose limits.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The test is performed in a dry run prior to bringing the Sodium-24 on site. All equipment is used and the procedures for transporting and injecting the tracer are performed in a dry run prior to bringing the Sodium-24 on site. Any accidents occurring due to the handling or injection of the tracer are bounded by the off-site dose projection. Therefore, there is no possibility of a different type of accident occurring than previously evaluated.

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

The margin of safety is not reduced because the amount of Sodium-24 added to the secondary plant will not raise the activity level above the Technical Specification limit.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0334
Activity No. SPP 98-091

DESCRIPTION:

The proposed activity will verify proper operation of the 2AF005A-H valve trim sets installed under DCP 9700559. The proposed activity verifies acceptable minimum and maximum auxiliary feedwater flowrates through the valves, acceptable pump performance, and a functional check of flow control.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The proposed activity is performed in Modes 5 or 6 when the AF system is not operable and is not required by the Technical Specifications. The AF system is not required to mitigate any accidents in these plant conditions so the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed activity is performed in Modes 5 or 6 when the AF system is not operable and is not required by the Technical Specifications. The AF system is not required to mitigate any accidents in these plant conditions. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The proposed activity is performed in Modes 5 or 6 when the AF system is not operable and is not required by the Technical Specifications. Therefore, the margin of safety is not reduced as a result of this activity.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0341
Activity No. SPP 99-033

DESCRIPTION:

The proposed activity provides the steps necessary to downpower and reenergize Westinghouse 7300 cabinets 2PA01J through 2PA08J, 2PA20JA, 2PA20JB, 2PA33J, and 2PA34J. The procedure also lists equipment powered/lost from each of the cabinets and actions required for the loss of the equipment. This procedure will be performed in Mode 5 or 6.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

Worst case bounding events are not deemed credible in Modes 5 and 6 because the energy contained within the reactor pressure boundary, reactor coolant temperature and pressure, and the corresponding stresses result in the probability of occurrence being significantly reduced or eliminated and in minimal consequence.

In Modes 5 and 6, the primary function of the residual heat removal (RH) system is to remove decay heat generated in the fuel. The proposed activity does not adversely impact the ability to perform its heat removal function. The RH system will remain operable within the limiting conditions of operations as defined by Technical Specifications.

In Modes 5 and 6 with the reactor vessel head on, the low temperature overpressure protection (LTOP) system controls reactor coolant system (RCS) pressure at low temperatures so the integrity of the reactor coolant pressure boundary is not compromised. RCS overpressure protection is provided by having a minimum coolant input capability and by having adequate pressure relief capability. The proposed activity will not increase the coolant input capability or reduce the pressure relief capability less than the Technical Specification LCO.

The ultimate heat sink (UHS) and essential service water (SX) makeup system provides a heat sink to mitigate UFSAR accidents. The proposed changes do not adversely affect the post accident function of the UHS or SX makeup system. The limiting SX makeup system analysis assumes a loss of offsite power which also results in the loss of the SX cooling tower (SXCT) basin level indication and control room control for the deep well and circulating water (CW) makeup to the SXCT. The analysis shows that with manual initiation of the deep well pumps, basin levels would remain above the minimum acceptable usable water levels. Component cooling (CC), SX, and UHS are required to be operable in Modes 1-4.

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These systems function as support systems to RH and other required systems as defined by the definition of operable in accordance with Improved Technical Specifications (ITS). The impact of the SPP on these support systems is minimal and they will still be able to provide their related support functions as required.

The proposed maintenance activity does not adversely affect the operation of the required operable RH system, LTOP, UHS, or SX makeup system. The probability of a malfunction of equipment important to safety is unchanged. Systems impacted by this activity are still operable within the specific design requirements of the systems.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The RHR, LTOP, and UHS will not operated in a different manner than previously evaluated. The RH, LTOP, and UHS systems will be operated within the limiting conditions of operation as defined by Technical Specifications; thus, the proposed activity does not create the possibility of an accident of a different type from those previously evaluated. Support system functions will still be available to RH as required.

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

For the proposed SPP to support replacement of the Westinghouse 7300 power supplies, the margin of safety will not be reduced because the activities will be accomplished within the stated Technical Specification LCO.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0350 Revision 1
Activity No. SPP 99-030 Revision 1

DESCRIPTION:

The proposed activity changes the applicable plant modes in SPP 99-030 from "5, 6 and defueled" to "all". The purpose of SPP 99-030 is to verify DCP 9600414 has been installed correctly by testing the component cooling (CC) low discharge header pressure automatic start time delay relay for both the A and B Trains. The proper function of the installed modification will be verified by inserting a false low discharge header pressure signal and causing the standby CC pump to automatically start and then ensuring the undesirable restart of the standby pump upon shutdown does not occur.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The probability of an accident is not increased because the CC system cannot initiate an accident. The consequences of an accident are not increased. The CC system will be operated using normal operating procedures with a simulated low pressure condition generated as part of the test. This condition is within the design basis for the CC system. Only one train of CC is required for the system to perform its normal and post-accident function and one train of CC will be unaffected during the conduct of this test. The train under test will still be able to perform its function of automatically starting on an ESF signal and providing cooling water in any mode.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The test will not create the possibility of an accident or malfunction of a different type. The CC system design, functions, and operation remain unaffected by performance of this test in any mode. Overall system configuration will be controlled by existing plant operating procedures. CC pump operation will be within normal operating bands for all modes. Activation of the pressure switch will start the standby pump, creating system conditions very similar to normal pump transfers.

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

The margin of safety as defined in the Technical Specifications is not reduced because the safety-related portion of the system was not impacted by the

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0350 Revision 1
Activity No. SPP 99-030 Revision 1

modification or the testing being performed. The CC pumps will be fully available to start on an ESF actuation as required in all modes.

Safety Evaluation Summary Form

Tracking No. 6H-99-0351
Activity No. SPP 99-031

DESCRIPTION:

The proposed activity performs a differential pressure stroke test of 2CC9413B and 2CC9414 in the open and closed direction while acquiring diagnostic test data. This activity verifies proper operation of the valves under design basis conditions.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The test will be performed during a mode in which component cooling (CC) to the reactor coolant pumps (RCPs) is not required. A failure of the valves during this test will have no adverse affects on the plant. The system will not be operated outside of the parameters it would experience during an accident. The probability of a malfunction will not increase. The test will ensure proper operation of these valves during all modes of plant operation. The consequences of a malfunction will not increase. These valves will be verified to be operable prior to return to service and no new failure modes will be introduced.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

This procedure will verify proper operation of 2CC9413B and 2CC9414 in both the open and closed directions. The thrust values measured during the differential pressure and flow test will ensure the valves will operate during accident conditions. This test will verify the valves will operate to close or open under design basis conditions. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

This procedure does not affect any parameters upon which Technical Specifications are based. Therefore, there is no reduction in the margin of safety.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0364
Activity No. SPP 99-183

DESCRIPTION:

The proposed activity will direct the injection of sodium hypochlorite into the circulating water (CW) makeup line to control the early stages of zebra mussel growth. Sodium bisulfite will be added to the CW blowdown line to neutralize any residual chlorine in the blowdown stream prior to the water being returned to the river.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The hypochlorite feed system does not affect any accident initiators; therefore, no accident probabilities are increased. The chemical feed system will not negatively affect any initial condition or any design capabilities of the essential service water (SX) system. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The CW flume and the SX cooling tower currently have sodium hypochlorite injected for biological control. This activity changes the injection point from the discharge of the CW pumps to the CW makeup pump suction. This injection point does not adversely affect any system parameters; therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The addition of sodium hypochlorite to the CW flume does not affect the margin of safety of any system, structure, or component associated with the Technical Specifications. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0413
Activity No. SPP 99-040

DESCRIPTION:

The proposed activity is being performed to satisfy the design change testing requirements specified in DCP 9600047 for replacing the 2B diesel generator starting system air dryer 2DG01SB-D.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

No design basis accidents are affected by the diesel generator starting air system air dryers. The starting air system air dryers are not utilized in emergency mode operation. The ability of the diesel generators to accelerate to rated speed and voltage in less than 10 seconds and operate at loads up to 110% of rated is not affected by or during the testing using SPP 99-040.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

This test functionally verifies the operation of the replacement air dryer installed under DCP 9600047 while maintaining operability of the affected diesel generator. The test does not introduce any new operational limitations for the affected diesel generator and does not challenge the availability of the diesel generators.

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

The SPP does not affect any parameters upon which the Technical Specifications are based. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-01-0012
Activity No. SPP 00-019 and SPP 00-020

DESCRIPTION:

SPP 00-019 (Uprate Power Ascension - Unit 2) and SPP 00-020 (Uprate Power Ascension - Unit 1) direct the on-line implementation of Byron Units 1 and 2 power ascension from a core power level of 3411 MWt to the uprated power level of 3586.6 MWt. These procedures will demonstrate that affected plant parameters and equipment performance remain within acceptable limits as power is increased from 3411 MWt to 3586.6 MWt, provide management oversight and control of the activities, provide shift operations personnel clear instructions on testing and operational maneuvers to be performed as power levels are increased, and provide for the collection of data used to assess equipment performance during power escalation.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The procedures identify the expected operating parameters for each power ascension evolution. All operations during power ascensions are performed in accordance with approved station procedures and Technical Specification requirements. The temporary equipment used for monitoring will not impact operation of any safety-related equipment. The power ascension does not impair any safety related systems, structures, and components (SSCs) performance during accident or transient conditions. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated is not increased by this proposed activity.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The configuration, operation, and accident response of plant SSCs are unchanged during the power ascension. Analyses of transient events as a result of the power uprate have confirmed that no transient event results in a new sequence of events that could lead to a new or different accident scenario. The proposed activity does not result in any SSC operating outside the power uprate analyses assumptions, initial conditions, operating mode, or equipment line up that could result in a new or different accident or transient than that analyzed for the power uprate.

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

Safety Evaluation Summary Form

Tracking No. 6G-01-0012
Activity No. SPP 00-019 and SPP 00-020

The power uprate ascension will be performed in accordance with the Technical Specifications and Bases as amended by the NRC Safety Evaluation approving the proposed Technical Specification changes for operation at the uprated power level. The proposed power uprate ascension procedures will not reduce the margin of safety as defined in the Technical Specification basis as amended by the NRC Safety Evaluation.

Safety Evaluation Summary Form

Tracking No. 6H-01-0011
Activity No. SPP 01-003

DESCRIPTION:

The proposed activity will collect performance test data over a two-hour time period to be used for the electrical output warranty data collection requirements for the Byron power uprate project and will also provide for accurate testing of a nuclear unit steam turbine for the purpose of obtaining the level of performance with the procedures of ANSI/ASME Performance Test Code PTC 6-1996 using the Alternative Method.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

No activity in SPP 01-003 testing affects any initial condition, assumptions, or status of equipment and systems described in UFSAR, Table 15.0-7 "Plant Systems and Equipment Available for Transients and Accident Conditions". Therefore, the proposed activity will not alter radioactive consequences described in UFSAR Chapter 15, and the probability of occurrence of an accident or transient is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

During the performance of this activity, the plant can be operated in a safe manner consistent with Technical Specifications and with some secondary plant systems temporarily deviating from UFSAR descriptions. However, the impacts are within the design basis and do not impact the plant safety analysis. As a result, operations and alterations performed under this activity will not create the possibility of an accident or transient of a different type than previously evaluated.

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

During the performance of this activity, the plant can be operated in a safe manner consistent with Technical Specifications and with some secondary plant systems temporarily deviating from UFSAR descriptions. The impacts are within the design basis and do not impact the plant safety analysis. As a result, operations and alterations performed under this activity will not reduce the margin of safety as defined in the basis for any Technical Specification.

50.59 REVIEW COVERSHEET FORM

LS-AA-104-1001

01/11/01

Location: Byron Nuclear Station

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Activity/Document Number: SPP 01-008

Revision Number: 0

Title: Optimizing Letdown Flow For RCS Shutdown Chemistry Cleanup

Description of Activity:

The proposed activity allows increased chemical and volume control system (CVCS) letdown flow up to a maximum of 150 gpm for reactor coolant system (RCS) radioactive material cleanup following a plant shutdown with the RCS depressurized and at a temperature less than 140°F. The activity includes operation with: residual heat removal (RH) flow isolated to the RCS on the RH train providing letdown to the CVCS, letdown flow controlled by throttling valve _CV128, parallel flow through letdown heat exchangers _CV04AA and _CV04AB, parallel flow through control valve _CV131 and associated bypass valve _CV8409, flow of up to 150 gpm through mixed bed demineralizer _CV01DA or _CV01DB, flow of up to 150 gpm through reactor coolant filter _CV03F, and flow of up to 150 gpm through volume control tank (VCT) _CV01T. VCT pressure will be reduced to 5 psig to provide for the increased letdown flow rate. Letdown will be diverted to the recycle hold up tanks (HUTs) via _CV112A, up to a maximum letdown rate of 150 gpm. During manual divert with _CV112A, data will be collected to determine how much back pressure the VCT nozzle is adding and to determine the impact on letdown flow rate. The SPP also provides for the collection of system data to support future flow analysis for permanent system design changes.

Reason for Activity:

Improving RCS radioactive material cleanup following a plant shutdown and reducing radiation levels inside the containment will result in reduced radioactive exposure to workers inside containment during an outage. Reducing the time for RCS radioactive material cleanup may reduce the overall length of a refueling outage.

Effect of Activity:

Isolating a single train of RH flow to the RCS, parallel flow through both letdown heat exchangers, parallel flow through _CV131 and _CV8409, and lowering VCT pressure will increase letdown flow. The effect of increased letdown flow is to reduce the time required for RCS radioactive material cleanup following a plant shutdown, providing for reduced radiation levels inside the containment building during a refueling outage. Purifying the reactor coolant reduces the hard gamma emitting radioactive species (Cobalt-58) to a level that minimizes the radiation dose rates from the coolant after flood up of the refueling cavity for core alterations. The increased letdown flow results in higher flow velocities through the RH/CV letdown lines and letdown line components. Isolating a single train of RH flow to the RCS will reduce flow through the associated RH pump.

Summary of Conclusion for the Activities 50.59 Review:

The use of SPP 01-008 does not have any impact on RH and CVCS operation as described in the UFSAR. The operation of plant equipment required to mitigate the consequences of design basis events is not degraded. The consequences of previously evaluated accidents or transients are not increased. Additionally, no new type accidents, transients, or equipment malfunctions are created by the proposed SPP.

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

X

**Applicability
Review**

50.59 Screening

50.59 Screening
No.

Rev. _____

50.59 Evaluation

50.59 Evaluation
No.

Rev. _____

50.59 Validation

50.59 Validation
No.

6H-01-0040

Rev. 0

50.59 REVIEW COVERSHEET FORM

LS-AA-104-1001
01/11/01

Location: Byron

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Activity/Document Number: SPP 00-019 Revision 1 and SPP 00-020 Revision 1

Revision Number: 0

Title: Byron Unit 1 and Unit 2 On-Line Power Uprate Implementation Procedures

Description of Activity:

SPP 00-0019 Revision 1 and SPP 00-020 Revision 1 direct the implementation of Unit 1 and Unit 2 power ascension from a core power value of 3411MWt to 3586MWt. The proposed activity revises the condensate pump suction pressure acceptance criteria from > 10 psia to a level 1 value of > 5.0 psia and a level 2 value of > 8.7 psia. Exceeding a level 1 acceptance criteria is grounds for suspending the SPP while if a Level 2 criteria is exceeded, the SPP may be continued after an investigation by Operations and Engineering personnel. These acceptance criteria are provided to ensure equipment performs as expected during the uprate process.

Reason for Activity:

The change in condensate pump suction pressure acceptance criteria is due to a reevaluation of the expected equipment response because of the power uprate.

Effect of Activity:

The proposed changes are still within the design capability of the equipment. The addition of Level 2 acceptance criteria provides assurance that the equipment will be evaluated if the response varies too far from the expected response.

Summary of Conclusion for the Activities 50.59 Review:

The proposed change to the SPPs does not alter the conclusions of the original evaluation. There is no increase in the probability of occurrence of any accident or transients because the procedures do not require any SSCs to perform functions outside their design basis and therefore do not introduce any new potential failures or operating transients. There is no increase in the consequences of any accident or transient because no systems or components which are required for accident or transient mitigation will be operated, shutdown, or isolated so as to impact their ability to perform their safety-related accident mitigation functions. There is no possibility of an accident or transient different than those previously evaluated because the procedures do not change the configuration, operation, or accident response of plant systems and components. An analysis of transient events as a result of the power uprate have confirmed that no transient event results in a new sequence of events that could lead to a new or different accident scenario.

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review		
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	Rev. _____
<input type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	Rev. _____
<input checked="" type="checkbox"/>	50.59 Validation	50.59 Validation No.	Rev. <u>0</u>

50.59 REVIEW COVERSHEET FORM

Station: Byron

Activity/Document Number: SPP 01-003

Revision Number: 2

Title: Byron Power Uprate Project Pre and Post Installation Electrical Output Test

Description of Activity:

This proposed activity revises SPP 01-003 to lower level in the hotwell by rejecting water through the condensate polishing (CP) system, using Byron Operating procedure BOP CP-3, to the condensate storage tank (CST). The change also adds a note to allow the Shift Manager to not lower hotwell level if the existing controlling channel indicates in the normal green band as indicated on the main control board.

Reason for Activity:

Lowering the level in the hotwell by rejecting water through the CP system, using BOP CP-3, to the CST will improve the quality of the water being rejected from the hotwell. This draining process uses an existing plant procedure which allows a more controlled method of lowering hotwell level. The added note will allow flexibility for the Shift Manager to decide if the hotwell will need to be rejected to the CST.

Effect of activity:

These changes do not affect or change the intent of adjusting hotwell level in the procedure and are consistent with normal plant procedures.

Summary of Conclusion for the Activities 50.59 Review:

The proposed changes to the SPP provide for enhanced procedural performance while using existing plant procedures. The plant will continue to be operated in a safe manner consistent with the Technical Specifications and UFSAR. The proposed changes are within the design basis and do not impact the plant safety analysis. Therefore, the proposed activity may be implemented without prior NRC review and approval.

Attachments:

- Attach completed Applicability Review if 50.59 Screening is not required.
- Attach completed 50.59 Screening if 50.59 Evaluation is not required.
- Attach completed 50.59 Evaluation if required to be performed.
- Attach completed 50.59 Screening and 50.59 Evaluation if discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review				
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	_____	Rev.	_____
<input type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	_____	Rev.	_____
<input checked="" type="checkbox"/>	50.59 Validation	50.59 Validation No.	<u>6H-01-0067</u>	Rev.	<u>0</u>

50.59 REVIEW COVERSHEET FORM

Station: Byron

Activity/Document Number: SPP 01-007

Revision Number: 0

Title: Byron Power Uprate Project Unit 2 Moisture Carryover Test

Description of Activity:

This proposed activity determines the average moisture carryover from the four Unit 2 steam generators (SGs) by injecting a radioactive tracer into the SGs. The testing method is in accordance with ASME Performance Test Code PTC 6 and uses the isotope Sodium-24 (Na^{24}) as the tracer. Moisture carryover is determined by testing when Unit 2 is at full power. During the test, a radioactive tracer (sodium-24) is injected into the feedwater (FW) and carried to the SGs with FW flow. Since the tracer does not evaporate with the generation of steam, all of the tracer should remain in the SGs except for a small amount contained in entrained water droplets (moisture carryover). Following tracer injection, samples of returning condensate and FW are tested for tracer concentration. The amount of tracer detected in samples as compared to the amount retained in the SGs is a measure of moisture carryover.

A vendor (NWT Corporation) has been contracted to assist with determining moisture carryover and to perform the following functions: procure the tracer, provide test equipment, handle the tracer, and provide an evaluation of moisture carryover. Presented in this review are the associated calculations for determining moisture carryover.

Moisture carryover is to be determined by injecting radioactive tracer (Na^{24}) into the FW system and analyzing samples from the condensate system. The scope of this procedure includes receiving the tracer cask, transporting the tracer cask to the turbine building, connecting test equipment, aligning plant systems, performing a dry run, injecting, sampling, and restoring the plant.

Reason for Activity:

Westinghouse Model D5 SGs are installed in Byron Unit 2. These SGs were designed with a moisture separator package that can deliver high quality steam at a flow-rate of approximately 3.8 million-pounds per hour. Power uprate raises steam flow by approximately 5%. No Model D5 SG with Byron's current moisture separator package has operated at this high of steam flow. Moisture carryover (MCO) increases with increasing steam flow. There is an engineering concern the design specification of 0.25% MCO may be exceeded. As a result, the moisture content of the steam leaving the SG is to be determined.

Effect of activity:

The performance of the proposed activity has the following effects: 1) ALARA - the tracer has an activity of approximately 0.500 millicuries, 2) Offsite dose, 3) New radiological controlled areas (RCAs) - Additional portions of the turbine building will become RCAs (e.g., injection area, puddles, sample sink), 4) Automatic level control for the main condenser hotwell will be stopped; hotwell level will be raised to a high level, 5) SG blowdown will be diverted from the hotwell to a monitor tank, 6) SG blowdown flow rates will be reduced below normal flow rates, and 7) Automatic closure of the SG sample valves on a high radiation signal will be blocked.

Summary of Conclusion for the Activities 50.59 Review:

During the performance of this activity, the plant can be operated in a safe manner consistent with Technical Specifications with several systems temporarily deviating from UFSAR descriptions. The impacts are within the design basis and do not impact the plant safety analysis. Therefore, the proposed activity may be implemented without prior NRC review and approval.

50.59 REVIEW COVERSHEET FORM

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review		_____		_____
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	_____	Rev.	_____
<input type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	_____	Rev.	_____
<input checked="" type="checkbox"/>	50.59 Validation	50.59 Validation No.	<u>6H-01-0068</u>	Rev.	<u>0</u>

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LS-AA-104-1001
01/11/01

tion: Byron

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Activity/Document Number: SPP 02-010

Revision Number: 0

Title: Increasing Letdown Flow For Reactor Coolant System Shutdown Chemistry Cleanup

Description of Activity:

The proposed activity increases chemical and volume control (CV) system letdown flow up to a maximum of 150 gpm for reactor coolant system (RCS) radioactive material cleanup following a plant shutdown. The activity includes: throttling residual heat removal (RH) pump discharge flow to increase RH system pressure at the branch to CV letdown, throttling flow through valves 1/2CV128, parallel flow through letdown heat exchangers 1/2CV04AA and 1/2CV04AB, parallel flow through control valves 1/2CV131 and associated bypass valves 1/2CV8409, flow of up to 150 gpm through mixed bed demineralizers 1/2CV01DB, flow of up to 150 gpm through reactor coolant filters 1/2CV03F, and flow of up to 150 gpm through volume control tanks (VCTs) 1/2CV01T. VCT pressure is reduced to 5 psig to provide for the increased letdown flow rate. The RCS is drained down to the reactor vessel flange by partially diverting increased letdown flow with the 1/2CV112A valves to the recycle holdup tanks (HUTs) 0AB01TA and 0AB01TB.

Reason for Activity:

The performance of this procedure will improve RCS radioactivity material cleanup following a plant shutdown and reducing radiation levels inside the containment will result in reduced radioactive exposure to workers inside containment during an outage. Reducing the time for RCS radioactive material cleanup may reduce the overall length of a refueling outage.

Effect of Activity:

Increasing RH pressure at the branch of CV letdown, use of both letdown heat exchangers, parallel flow through 1/2CV131 and 1/2CV8409, and lowering VCT pressure will increase letdown flow. The effect of increased letdown flow is to reduce the time required for RCS radioactive material cleanup following a plant shutdown. It will also reduce radiation levels inside the containment building during a refueling outage. Purifying the reactor coolant reduces the hard gamma emitting radioactive species (Cobalt-58) to a level that minimizes the radiation dose rates from the coolant after flood up of the refueling cavity for core alterations. The increased letdown flow results in higher flow velocities through the letdown line and letdown line components. The increased letdown rate provides for an increased RCS drain down to the level of the reactor vessel flange.

Summary of Conclusion for the Activities 50.59 Review:

The evaluation completed for this activity concluded the proposed activity may be implemented without prior NRC review and approval. The affect of the increased letdown flow on the various components has been evaluated and has been found to be acceptable. The proposed activity does not require prior NRC approval because it does not result in an increase in the frequency of occurrence or consequences of an accident or malfunction of a system, structure, or component (SSC) previously addressed in the UFSAR. In addition, there is no possibility of creating an accident of a different type or different result or malfunction of an SSC of a different type or different result than previously evaluated in the UFSAR.

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Station: Byron

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Activity/Document Number: SPP 02-010

Revision Number: 0

Title: Increasing Letdown Flow For Reactor Coolant System Shutdown Chemistry Cleanup

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review			
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	_____	Rev. _____
<input checked="" type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	<u>6G-02-0013</u>	Rev. <u>0</u>
<input type="checkbox"/>	50.59 Validation	50.59 Validation No.	_____	Rev. _____

50.59 REVIEW COVERSHEET FORM

LS-AA-104-1001

01/11/01

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Location: Byron

Activity/Document Number: SPP 01-022

Revision Number: 0

Title: Byron Unit 1 Power Uprate Project Full Power Ascension Procedure

Description of Activity:

This procedure directs Byron Unit 1 power ascension from a pre outage limitation of Governor Valves Wide Open power level (~3522 MWt) to the full uprated core power level of 3586.6 MWt. The uprate power ascension is accomplished as follows:

1. Following B1R11, the unit will be ramped to the full uprate power level of 3586.6 MWt from the pre outage limitation of Governor Valves Wide Open power level (~3522 MWt)
2. After a one-hour soak period at this final power level, plant systems and equipment will be monitored to confirm acceptability for continued testing and operation at the 3586.6 MWt plateau.

Reason for Activity:

DCP 9900782 provided the Engineering controls to ensure that changes to plant design documents, operating procedures and the UFSAR were made consistent with the NRC Safety Evaluation Report approving Power Uprate. Additionally, the DCP controlled the implementation of Power Uprate by ensuring that all required activities (including physical plant changes) were completed prior to exceeding the former licensed core thermal power level of 3411 MWt. The control of the implementation of the Power Uprate was performed by the power ascension testing requirements specified in the Power Uprate Ascension Special Testing Procedure SPP-00-020 and was completed when the limitation of Governor Valves Wide Open power level (~3522 MWt) was obtained. SPP 01-022 will complete the power ascension to the full power uprate level of 3586.6 MWt.

Object of Activity:

1. Demonstrate that affected plant parameters and equipment performance will remain within acceptable limits as power is increased to 3586.6 MWt.
2. Provide management oversight and control of the activities to assure safe operation of Byron Unit 1 at 3586.6Wt.
3. Provide for the collection of data used to assess equipment performance during power escalation and to confirm acceptability for continued operation at 3586.6 MWt.
4. Ensure that plant radiation surveys have been completed following power increases and that radiation survey maps and RWPs have been updated as required to control radiation exposure of station personnel.

Summary of Conclusion for the Activities 50.59 Review:

SPP 01-022 can be performed without prior NRC review and approval as documented on the attached evaluation. The proposed activity is not an initiator to any accident, will not alter the consequences of any analyzed accident, or create the possibility of a different type of accident. All potentially affected systems, structures, or components (SSCs), and their potential failure modes, are bounded by the existing failures modes and effects analysis, hence, the consequences of any failure of an SSC remain unchanged. The proposed activity does not affect any design basis limit for fission product barrier. Finally, this procedure does not involve a method of evaluation, hence, there is no departure from a method of evaluation described in the UFSAR.

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

50.59 REVIEW COVERSHEET FORM

LS-AA-104-1001

01/11/01

Page 2 of 2

Forms Attached: (Check all that apply.)

<input type="checkbox"/>
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Applicability Review

50.59 Screening

50.59 Evaluation

50.59 Validation

50.59 Screening No.

50.59 Evaluation No.

50.59 Validation No.

6H-02-0004

Rev.

Rev.

Rev.

0

Technical Requirements Manual (TRM)
and Technical Specification (TS) Bases
Changes

1.	6H-99-0019
2.	6H-99-0020
3.	6H-99-0022
4.	6H-99-0028
5.	6H-99-0038
6.	6G-01-0018
7.	6G-01-0023
8.	6G-01-0029
9.	6G-01-0034
10.	6G-01-0035
11.	6H-01-0017
12.	6H-01-0057
13.	6H-01-0069
14.	6G-02-0009
15.	6H-02-0012

Safety Evaluation Summary Form

Tracking No. 6H-99-0019
Activity No. Technical Requirements Manual Revision E

DESCRIPTION:

This activity is a result of implementing Technical Specification Amendment 106, also referred to as Improved Technical Specifications (ITS). This activity documents changes to current Byron Technical Specifications (CTS) that were relocated to the Byron Technical Requirements Manual (TRM) during the conversion to ITS. All relocations to the TRM were considered changes since at a minimum the format of the specification was modified to replicate ITS. Each change was categorized as (A) for administrative which included format changes, (M) for more restrictive than CTS, (L) for less restrictive than CTS, or (R) for relocation indicating the final location of the specification was outside the TRM.

Specifically, this activity discusses the administrative changes associated with TRM Revision D to TRM Revision E. These changes are the result of changes to the ITS submittal subsequent to the issuance of Revision D of the TRM, providing corrections and clarifications to Revision D of the TRM to restore the original intent of the CTS specifications, and to parallel certain applicable changes made in the ITS submittal for human factor considerations.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report are not increased because the changes are administrative and involve wording preferences and format changes. These changes do not involve any physical changes to plant systems, structures, or components (SSCs). The changes also do not decrease the level of safety to which these SSCs are operated or maintained.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the changes are administrative and involve wording preferences and format changes. These changes do not involve any physical changes to plant SSCs. The changes also do not decrease the level of safety to which these SSCs are operated or maintained.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0019
Activity No. Technical Requirements Manual Revision E

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

The change does not affect any parameters upon which Technical Specifications are based. The change only affects the Technical Requirements Manual.

Safety Evaluation Summary Form

Tracking No. 6H-99-0020
Activity No. Technical Requirements Manual Section 3.5.a Revision

DESCRIPTION:

This activity is a result of implementing Technical Specification Amendment 106, also referred to as Improved Technical Specifications (ITS). This activity documents changes to current Byron Technical Specifications (CTS) that were relocated to the Byron Technical Requirements Manual (TRM) during the conversion to ITS. All relocations to the TRM were considered changes since at a minimum the format of the specification was modified to replicate ITS. Each change was categorized as (A) for administrative which included format changes, (M) for more restrictive than CTS, (L) for less restrictive than CTS, or (R) for relocation indicating the final location of the specification was outside the TRM.

Specifically, this activity identifies a less restrictive change to the TRM LCO for ECCS Subsystems- $T_{avg} < 200^{\circ}\text{F}$ and Pressurizer Level $< 5\%$ (Section 3.5.a). The change eliminates the requirement to verify the circuit breaker position and control switch position for the Safety Injection (SI) pump, relying on instead other means allowed by Technical Specification Amendment 106 to render the pump incapable of injecting into the Reactor Coolant System (RCS).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report are not increased because the change replaces one method of making a SI pump incapable of injecting into the RCS with another method approved with Technical Specification Amendment 106. These changes do not involve any physical changes to plant systems, structures, or components (SSCs). The changes also do not decrease the level of safety to which these SSCs are operated or maintained.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the change replaces one method of making a SI pump incapable of injecting into the RCS with another method approved with Technical Specification Amendment 106. These changes do not involve any physical changes to plant SSCs. The changes also do not decrease the level of safety to which these SSCs are operated or maintained.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0020

Activity No. Technical Requirements Manual Section 3.5.a Revision

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

The change does not affect any parameters upon which Technical Specifications are based. The change only affects the Technical Requirements Manual.

Safety Evaluation Summary Form

Tracking No. 6H-99-0022
Activity No. Technical Requirements Manual Revisions

DESCRIPTION:

This activity is a result of implementing Technical Specification Amendment 106, also referred to as Improved Technical Specifications (ITS). This activity documents changes to current Byron Technical Specifications (CTS) that were relocated to the Byron Technical Requirements Manual (TRM) during the conversion to ITS. All relocations to the TRM were considered changes since at a minimum the format of the specification was modified to replicate ITS. Each change was categorized as (A) for administrative which included format changes, (M) for more restrictive than CTS, (L) for less restrictive than CTS, or (R) for relocation indicating the final location of the specification was outside the TRM.

Specifically, this activity identifies relocated requirements that were identified as being relocated to the TRM in ITS submittal Revisions E through T and after inclusion in TRM, were relocated to other owner controlled documents during subsequent TRM revisions. This activity documents where and how the relocated requirements are controlled.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report are not increased because the changes are administrative and involve wording preferences and format changes. These changes do not involve any physical changes to plant systems, structures, or components (SSCs). The changes also do not decrease the level of safety to which these SSCs are operated or maintained.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the changes are administrative and involve wording preferences and format changes. These changes do not involve any physical changes to plant SSCs. The changes also do not decrease the level of safety to which these SSCs are operated or maintained.

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

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0022
Activity No. Technical Requirements Manual Revisions

The change does not affect any parameters upon which Technical Specifications are based. The change only affects the Technical Requirements Manual.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0028
Activity No. Technical Requirements Manual Revision E

DESCRIPTION:

This activity is a result of implementing Technical Specification Amendment 106, also referred to as Improved Technical Specifications (ITS). This activity documents changes to current Byron Technical Specifications (CTS) that were relocated to the Byron Technical Requirements Manual (TRM) during the conversion to ITS. All relocations to the TRM were considered changes since at a minimum the format of the specification was modified to replicate ITS. Each change was categorized as (A) for administrative which included format changes, (M) for more restrictive than CTS, (L) for less restrictive than CTS, or (R) for relocation indicating the final location of the specification was outside the TRM.

Specifically, this activity discusses the administrative changes associated with TRM Revision D to TRM Revision E. These changes are the result of changes to the ITS submittal subsequent to the issuance of Revision D of the TRM, providing corrections and clarifications to Revision D of the TRM to restore the original intent of the CTS specifications, and to parallel certain applicable changes made in the ITS submittal for human factor considerations.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report are not increased because the changes are administrative and involve wording preferences and format changes. These changes do not involve any physical changes to plant systems, structures, or components (SSCs). The changes also do not decrease the level of safety to which these SSCs are operated or maintained.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because the changes are administrative and involve wording preferences and format changes. These changes do not involve any physical changes to plant SSCs. The changes also do not decrease the level of safety to which these SSCs are operated or maintained.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0028
Activity No. Technical Requirements Manual Revision E

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

The change does not affect any parameters upon which Technical Specifications are based. The change only affects the Technical Requirements Manual.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0038
Activity No. Technical Requirements Manual Section 3.0.e Revision

DESCRIPTION:

This activity is a result of implementing Technical Specification Amendment 106, also referred to as Improved Technical Specifications (ITS). This activity documents changes to current Byron Technical Specifications (CTS) that were relocated to the Byron Technical Requirements Manual (TRM) during the conversion to ITS. All relocations to the TRM were considered changes since at a minimum the format of the specification was modified to replicate ITS. Each change was categorized as (A) for administrative which included format changes, (M) for more restrictive than CTS, (L) for less restrictive than CTS, or (R) for relocation indicating the final location of the specification was outside the TRM.

Specifically, this activity identifies a less restrictive change to the TRM LCO 3.0.e. TRM LCO 3.0.e allows equipment removed from service or declared inoperable to comply with Actions to be returned to service under administrative control solely to perform testing required to demonstrate its operability, the operability of other equipment, or variable to be within limit. This activity addresses a minor change in the wording that deletes the allowance for testing to demonstrate variables to be within limits. This change is consistent with Technical Specification Amendment 106.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

This change is consistent with proposed and accepted changes implemented with Technical Specification Amendment 106. This change does not involve any physical changes to plant systems, structures, or components (SSCs). The changes also do not decrease the level of safety to which these SSCs are operated or maintained.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

This change is consistent with proposed and accepted changes implemented with Technical Specification Amendment 106. This change does not involve any physical changes to plant SSCs. The changes also do not decrease the level of safety to which these SSCs are operated or maintained.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0038

Activity No. Technical Requirements Manual Section 3.0.e Revision

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

The change does not affect any parameters upon which Technical Specifications are based. The change only affects the Technical Requirements Manual.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-01-0018

Activity No. Technical Requirements Manual Sections 3.10.b and 3.10.g

DESCRIPTION:

The proposed activity revises Technical Requirements Manual (TRM) surveillance requirement TSR 3.10.b.12, "Fire Suppression Water Supply System," to re-word the pump discharge requirement at the stated operating point of 150% of rated capacity. The effect of the proposed activity is a change to the acceptance criteria of the fire pump 18-month functional test in the TRM and the associated surveillance procedure. The proposed change will increase the existing +10% tolerance to a +40% tolerance allowing the pump performance to exceed its design basis requirement by more than the current 10% (up to 40%). TRM Section 3.10.g "Fire Rated Assemblies" is also revised to clarify the NOTES under the APPLICABILITY section. The effect of the change is to provide clarification that the conditions of the note apply to the assemblies (walls) and its associated sealing devices (fire doors, fire dampers, penetration seals).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The proposed revision to TRM Section 3.10.b "Fire Suppression Water Supply System", fire pump surveillance OBVSR 3.10.b.12-1, TRM Section 3.10.g "Fire Rated Assemblies", and associated procedure OBOL 10.g do not introduce the possibility of a change in the frequency of an accident because these activities are not an initiator of any accident and no new failure modes are introduced. The changes do not introduce the possibility of a change in the consequence of an accident or transient because these activities do not affect the severity of any accident and no new failure modes are introduced.

A change to allow a greater tolerance (+40% of rate pressure) permitting pump performance to exceed the minimum design capability by a greater margin is also proposed. Fire pump performance at the high end of the acceptance tolerance does not affect the integrity or operation of the fire protection system and provides greater margin for meeting the maximum demand upon the system. The proposed clarifications to TRM Section 3.10.g have no impact upon the integrity of fire rated assemblies. Therefore, the probability of a malfunction of equipment important to safety is not increased by the proposed activity.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed change to the TRM and associated procedures are clarifications and a minor change to the acceptance criteria for functional surveillance testing of

Safety Evaluation Summary Form

Tracking No. 6G-01-0018

Activity No. Technical Requirements Manual Sections 3.10.b and 3.10.g

the fire pumps. System operation, surveillance test method, system alignment, and required actions are not changed by the proposed activity. Therefore, the possibility of an accident or transient of a different type is not created.

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

Technical Specifications are not impacted by the proposed change.

50.59 REVIEW COVERSHEET FORM

50.59 Evaluation No.: 6G-01-0023

Station: Byron

Activity/Document Number: Technical Specification Bases Change #01-003 and Technical Requirements Manual (TRM) Change #01-005

Revision Number: 0

Title: Technical Specification Bases Change #01-003 and Technical Requirements Manual (TRM) Change #01-005

Description of Activity:

The following Technical Requirements Manual (TRM) and Technical Specification Bases changes will be made to reduce the required In Core Decay Time (ICDT) for refueling outage B2R09 from 100 hours to 80 hours:

TRM Section 3.9.a, "Decay time," states "The reactor shall be subcritical for \geq the last 100 hours (\geq 91 hours without coastdown assumptions met or \geq 80 hours with coastdown assumptions met for B1R10)." This activity will revise this statement to replace "(\geq 91 hours without coastdown assumptions met or \geq 80 hours with coastdown assumptions met for B1R10)" with "(\geq 80 hours for B2R09)."

TRM Section 3.9.a, Action Condition A states "Reactor subcritical for $<$ 100 hours ($<$ 80 hours for B1R10)." This activity will revise this statement to replace "B1R10" with "B2R09."

TRM Section 3.9.a, Action Condition B states "Unit coastdown does not meet the coastdown assumptions in dose calculation PSA-B-99-08, Rev. 4 (B1R10 only)." This activity will remove this Action Condition in its entirety.

TRM Surveillance TSR 3.9.a.1 states "Verify the reactor subcritical \geq 100 hours by confirming the date and time of subcriticality. (\geq 80 hours for B1R10) (\geq 91 hours for B1R10 if Action Condition B is in effect)." This activity will change "(\geq 80 hours for B1R10)" to "(\geq 80 hours for B2R09)," and will delete "(\geq 91 hours for B1R10 if Action Condition B is in effect)."

TRM Surveillance TSR 3.9.a.2 states "Verify the unit coastdown is in accordance with the coastdown assumptions in dose calculation PSA-B-99-08, Rev. 4 (B1R10 only)." This activity will delete this TSR in its entirety.

Technical Specification Bases 3.9.4, Containment Penetrations, Applicable Safety Analyses section, states, "The requirements of LCO 3.9.7, "Refueling Cavity Water Level," and the minimum decay time of 100 hours (91 hours without coastdown assumptions met or 80 hours with coastdown assumptions met for B1R10) prior to movement of irradiated fuel assemblies...." The phrase "(91 hours without coastdown assumptions met or 80 hours with coastdown assumptions met for B1R10)" will be replaced by "(80 hours for B2R09)."

Technical Specification Bases 3.9.7, Refueling Cavity Water Level, Applicable Safety Analyses section, states, "For B1R10, a cycle-specific analysis has been performed which demonstrates that with a minimum water level of 23 ft and a minimum decay time of 91 hours without coastdown assumptions met or 80 hours with coastdown assumptions met prior to fuel handling, offsite doses are maintained within allowable limits (Ref. 4)." This activity will revise this statement to read "For B2R09, a cycle-specific analysis has been performed which demonstrates that with a minimum water level of 23 ft and a minimum decay time of 80 hours prior to fuel handling, offsite doses are maintained within allowable limits (Ref. 4)."

Because this is a one-time, cycle-specific change, only applicable to B2R09, UFSAR Table 15.0-11 will not be revised to reflect the revised accident dose and UFSAR Section 6.5.1.2.3 will not be revised to reflect the higher efficiency for organic iodide.

50.59 REVIEW COVERSHEET FORM

50.59 Evaluation No.: 6G-01-0023

Reason for Activity:

It is anticipated that during B2R09, work activities will be completed and required plant configuration will be established to support commencing movement of irradiated fuel from the reactor vessel to the Spent Fuel Pool (SFP) prior to the current requirement of 100 hours after reactor shutdown. The current safety analysis for the containment fuel handling accident is based on a minimum decay time of 100 hours prior to movement of irradiated fuel assemblies within the reactor vessel. The spent fuel pool cooling analysis also assumes that fuel transfer begins after 100 hours decay time in the reactor core. This evaluation is required to determine if the proposed changes can be made under the provisions of 10CFR 50.59.

Effect of activity:

The proposed changes will allow starting fuel offloading activities earlier than the current 100 hours. This will save time on the critical path for the outages.

Summary of Conclusion for the Activities 50.59 Review:

This activity does not increase the frequency of occurrence of any accidents, or increase the likelihood of occurrence of a malfunction of an SSC important to safety, because all refueling activities will continue to use the normal refueling procedures and equipment. This activity does not result in more than a minimal increase in the consequences of an accident, or malfunction of an SSC important to safety, previously evaluated in the UFSAR. The increase in dose has been evaluated and is less than the "minimal increase" criteria of NEI 96-07. The Fuel Handling Building radiation monitors and ventilation system is not adversely impacted by the potential increase in radiation release. This activity does not create a possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in UFSAR. The increase in heat load in the Spent Fuel Pool has been evaluated and is bounded by the current analysis. There are no design basis limits for a fission product barrier that are exceeded or altered by the decrease in the In Core Decay Time. Although some inputs have been changed, the dose calculation used to evaluate whether the increase in consequences is "more than minimal" uses the same methodology currently approved by the NRC.

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review			
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	_____	Rev. _____
<input checked="" type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	<u>6G-01-0023</u>	Rev. <u>0</u>
<input type="checkbox"/>	50.59 Validation	50.59 Validation No.	_____	Rev. _____

50.59 REVIEW COVERSHEET FORM

50.59 Evaluation No.: 6G-01-0029

Station: Braidwood/Byron

Activity/Document Number: Technical Requirements Manual (TRM) TLCO 3.3.h

Revision Number: 0

Title: Revision to Power Distribution Monitoring System (PDMS)

Description of Activity:

The proposed activity will revise Technical Requirements Manual (TRM) Limiting Condition of Operation (TLCO) 3.3.h, "Power Distribution Monitoring System (PDMS)," as follows:

1. Revise the title of TRM TLCO 3.3.h from "Power Distribution Monitoring System (PDMS) Instrumentation" to "Power Distribution Monitoring System (PDMS)."
2. Revise the TLCO statement from "The PDMS Instrumentation for each Function in Table T3.3.h-1 shall be OPERABLE" to "The PDMS shall be OPERABLE with required PDMS instrumentation in Table T3.3.h-1 OPERABLE."
3. Revise the Applicability of TRM TLCO 3.3.h from "MODE 1 with THERMAL POWER >25% RTP when PDMS is OPERABLE" to "MODE 1 with THERMAL POWER >25% RTP."
4. Move the Action Note to Condition A, e.g.; Separate Condition entry is allowed for each Function.
5. Delete Required Action (RA) B.1, "Declare PDMS inoperable," and replace with RA B.1, "Apply LCO 3.1.4, "Rod Group Limits," as applicable with PDMS inoperable," and RA B.2, "Apply LCO 3.2.1, "Heat Flux Hot Channel Factor $F_{(Q)}(Z)$," as applicable, with PDMS inoperable" and RA B.3, "Apply LCO 3.2.2, "Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta H}^N$)," as applicable, with PDMS inoperable" and RA B.4, "Apply LCO 3.2.3, "Axial Flux Difference (AFD)," as applicable, with PDMS inoperable" and RA B.5, "Apply LCO 3.2.4, "Quadrant Power Tilt Ration (QPTR)," as applicable, with PDMS inoperable."
6. Revise the frequency of Surveillance Requirement (TSR) 3.3.h.1 for performing a CHANNEL CHECK from shiftly to weekly.
7. Delete the requirement contained in Table T3.3.h-1 Footnote (a), " T_c shall be from the same RCS loop and core quadrant as an OPERABLE Power Range Neutron Flux Monitor," and renumber footnotes accordingly.

Reason for Activity:

1. The title of TRM TLCO 3.3.h is being revised to clarify that the requirements associated with TLCO 3.3.h address PDMS, in general, not solely PDMS Instrumentation.
2. Similarly, the TLCO Statement is being revised to clarify that the requirements of TLCO 3.3.h addresses PDMS and its instrumentation, not solely PDMS instrumentation.
3. The Applicability is being revised to eliminate the conflict with the current Applicability and Condition B. Condition B applies when PDMS is inoperable for reasons other than Condition A. However, the Applicability is MODE 1 with THERMAL POWER >25% RTP when PDMS is OPERABLE. Therefore, if PDMS is inoperable the requirements of TLCO 3.3.h would not apply and Condition B not entered. To eliminate this conflict the Applicability is being revised to "MODE 1 with THERMAL POWER >25% RTP." Condition B would be entered with PDMS inoperable for reasons other than Condition A and the appropriate RAs followed.
4. The Action Note is being moved to Condition A because the Note only applies to the PDMS instrumentation functions in Table T3.3.h-1. Condition A applies to the PDMS instrumentation functions listed in Table T3.3.h-1, whereas Condition B applies when PDMS is inoperable for reasons other than the instrumentation being inoperable or when the RA and associated Completion Time of Condition A is not met.
5. The RA associated with Condition B is being revised to direct the operator to specific Technical Specification LCOs which must be considered with PDMS inoperable for reasons other than Condition A or the RA and associated Completion Time of Condition A not met. The current RA to declare PDMS inoperable does not provide sufficient immediate guidance to the operator.

50.59 REVIEW COVERSHEET FORM

50.59 Evaluation No.: 6G-01-0029

6. The current Surveillance frequency is excessively burdensome on the operator and distracts him/her from other duties. PDMS internally performs stringent data quality checks and confirms adequate PDMS instrumentation per TRM TLCO 3.3.h requirements. Manual channel checks merely duplicate what PDMS does continuously but to a lesser degree.
7. The requirement in Table T3.3.h-1 Footnote (a) is excessive and is not technically required. The Best Estimate Analyzer for Core Operations Nuclear (BEACON) methodology does not use the excore detectors to modify the radial power distribution. Therefore, the lack of T_{cold} (T_c) to power range channel geometrical correlation has no effect on PDMS calculations.

Effect of activity:

1. The effect of revising the title is to clarify that the TLCO is applicable to entire PDMS, not solely the instrumentation for PDMS. This change is editorial and will have no effect on plant operation or PDMS operability.
2. Similarly, the effect of revising the TLCO statement is to clarify that the requirements of TLCO 3.3.h apply to PDMS and PDMS instrumentation. This change is also considered editorial and will have no effect on plant operation or PDMS operability.
3. The effect of revising the Applicability is to eliminate the existing conflict with Condition B and any confusion this may pose to operators when applying the rules of usage. This change is considered editorial and will enhance human performance. This change has no effect on plant operation or PDMS operability.
4. The effect of moving the Action Note is to clarify that the allowance for separate Condition entry applies to the instrumentation functions and not for reasons other than instrumentation inoperability. This change is consistent with the rules of usage and is considered an editorial change. This change will also have no effect on plant operation or PDMS operability.
5. The effect of revising the RA of Condition B is to provide more specific immediate guidance to the operator. The specified RAs are consistent with existing procedural requirements and, therefore, will have no effect on plant operation or PDMS operability.
6. The effect of revising the Surveillance frequency of TSR 3.3.h.1 is to reduce Operator burden. There will be no effect on PDMS because PDMS internally performs channel checks continuously.
7. There is no effect on PDMS calculations by removing the requirement for having T_c be from the same RCS core quadrant and loop as an OPERABLE power range neutron flux monitor. The BEACON methodology does not use the excore detectors to modify the radial power distribution. Therefore, the lack of T_{cold} (T_c) to power range channel geometrical correlation has no effect on PDMS calculations.

Summary of Conclusion for the Activities 50.59 Review:

The proposed TRM revisions can be implemented without prior NRC approval since they do not meet any of the criteria in paragraph (c)(2) of 10 CFR 50.59. The proposed changes will not affect the probability or the consequences of any previously analyzed accident or create a new accident. The proposed changes do not affect any design basis fission product barrier or any method of evaluation.

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

50.59 REVIEW COVERSHEET FORM

50.59 Evaluation No.: 6G-01-0029

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review		_____		_____
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	_____	Rev.	_____
<input checked="" type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	<u>6G-01-0029</u>	Rev.	<u>0</u>
<input type="checkbox"/>	50.59 Validation	50.59 Validation No.	_____	Rev.	_____

50.59 REVIEW COVERSHEET FORM

50.59 Evaluation No.: 6G-01-0034

Station: Byron

Activity/Document Number: Technical Requirements Manual (TRM) Change #01-032

Revision Number: 0

Title: TRM Change #01-032, TRM Section 3.9.a, "Incore Decay Time"

Description of Activity:

The proposed activity makes the following Technical Requirements Manual (TRM) changes to reduce the required Incore Decay Time (ICDT) for refueling outage B1R11 from 100 hours to 74 hours:

TRM Section 3.9.a, "Decay time," states "The reactor shall be subcritical for \geq the last 100 hours (\geq 80 hours for B2R09)." This activity will revise this statement to replace " \geq 80 hours for B2R09" with " \geq 74 hours for B1R11)."

TRM Section 3.9.a, Action Condition A states "Reactor subcritical for $<$ 100 hours ($<$ 80 hours for B2R09)." This activity will revise this statement to replace " $<$ 80 hours for B2R09" with " $<$ 74 hours for B1R11)."

TRM Surveillance TSR 3.9.a.1 states "Verify the reactor subcritical \geq 100 hours by confirming the date and time of subcriticality. (\geq 80 hours for B2R09)." This activity will change " \geq 80 hours for B2R09)." to " \geq 74 hours for B1R11)."

Reason for Activity:

It is anticipated that during B1R11, work activities will be completed and the required plant configuration will be established to support commencing movement of irradiated fuel from the reactor vessel to the spent fuel pool (SFP) prior to the current requirement of 100 hours after reactor shutdown. The SFP cooling analysis assumes that fuel transfer begins after 100 hours decay time in the reactor core. This evaluation is therefore required to determine if the proposed changes can be made under the provisions of 10 CFR 50.59. Because past ICDT TRM changes were considered one-time, cycle-specific changes, no UFSAR changes were made. However, since reduction in ICDT is becoming a common practice, DRP 9-066 was completed to permanently change the UFSAR to reflect the option of shorter ICDT's.

Contrary to prior ICDT TRM changes, this change does not address the radiological consequences of a Fuel Handling Accident (FHA). Since the last ICDT TRM change, the radiological consequences of a FHA have been revised under the Power Uprate (PUR) program using an ICDT of 48 hours. The changes applicable to the FHA did not require review under 50.59, as it was reviewed and approved by the NRC in NRC Letter dated May 4, 2001 to Oliver D. Kingsley (Exelon), Subject: Issuance of Amendments; Increase in Reactor Power, Byron Station, Units 1 and 2, and Braidwood Station, Units 1 and 2.

Effect of activity:

The proposed changes will allow starting B1R11 fuel offloading activities earlier than the current 100 hours. This will save time on the critical path for the outages. Occupational dose on the refueling machine may increase slightly.

50.59 REVIEW COVERSHEET FORM

50.59 Evaluation No.: 6G-01-0034

Summary of Conclusion for the Activities 50.59 Review:

Changing the Incore Decay Time (ICDT) from 100 hours to 74 hours does not change the frequency of an accident because the proposed change does not increase the failure rate of refueling equipment or increase the risk of a fuel handling accident due to human error. Spent fuel handling tools will not change nor will the method/procedures for handling spent fuel assemblies. The total number of fuel assemblies to be transferred, and the transfer rate, remains the same. There is no effect on the failure probabilities of the SFP cooling system.

Revision 000B to calculation BRW-00-0010-M/BYR2000-007 has been performed to evaluate the impact of changing the ICDT. This calculation accounts for margin remaining in the background decay heat load since the SFP is not filled to capacity. The results of this analysis show the maximum bulk water temperature calculated in the design basis and the time-to-boil evaluations are not altered by changing the ICDT from 100 hours to 74 hours for B1R11. In addition, it has been verified the maximum local water temperature, the maximum fuel cladding temperature, and the maximum cladding heat flux remain acceptable.

The design basis spent fuel pool criticality analysis (for the Spent Fuel Re-rack Project) assumes a bulk pool water temperature of 4°C (39°F). The proposed change would potentially increase the temperature of the water in the SFP, thus adding negative reactivity. The SFP criticality analysis is therefore not adversely affected.

There are no dose consequences impacted by this change. The Incore Decay Time associated with radiological concerns (dropped fuel assembly) has been reduced to 48 hours under the PUR program which has been reviewed and approved by NRC.

Beginning core alteration and fuel transfer operation as early as 74 hrs after shutdown is not expected to significantly increase the occupational dose. Areas in the plant are divided into radiation zones as indicated in UFSAR Tables 12.3-1 and 12.3-2. The design dose rate for each zone is selected to ensure that the exposure limit of 10CFR20 is not exceeded. Shielding is established based on ALARA to minimize the dose rate for the selected areas. The areas affected by the defueling operation is designated as High Radiation area (Zone III) with a design dose rate of > 100 mrem/hr. Access to these areas is controlled in accordance with station procedures and radiation work permits. Electronic dosimeters are required to continuously monitor the dose rate in the areas in order to limit personnel exposure to below 10CFR20 limits. These existing controls are not affected.

The fission product barriers potentially affected by this change are the fuel clad and the reactor containment. This change does not result in a change to the internal containment pressure that would represent a challenge to the containment design basis limit of 50 psig. Revision 000B to calculation BRW-00-0010-M/BYR2000-007 shows the calculated maximum fuel cladding temperature remains well below the mean cladding operating temperature of 700°F (far below the design basis limit of 2,200°F), and the maximum calculated heat flux for a fuel assembly is a fraction of the required heat flux for Departure from Nucleate Boiling (DNB). Therefore, no DBLFPB as described in the UFSAR is being exceeded or altered.

The changes made by this activity represent changes in input parameters to the design basis analysis. This activity does not change the method of evaluation described in the UFSAR or in the SER for the Power Uprate Project.

50.59 REVIEW COVERSHEET FORM

50.59 Evaluation No.: 6G-01-0034

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review		_____	_____
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	_____	Rev. _____
<input checked="" type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	<u>6G-01-0034</u>	Rev. <u>0</u>
<input type="checkbox"/>	50.59 Validation	50.59 Validation No.	_____	Rev. _____

50.59 REVIEW COVERSHEET FORM

50.59 Evaluation No.: 6G-01-0035

Station: Byron

Activity/Document Number: Technical Specification Bases Change #01-016

Revision Number: 0

Title: Technical Specification Bases B3.4.15 Revision to Incorporate Containment Sump Level Monitors PC002 and PC003

Description of Activity:

The proposed activity revises Technical Specification Bases B3.4.15 such that the containment floor drain sump flow monitor RF008 is normally utilized to fulfill the containment sump monitoring requirement of Technical Specification 3.4.15, but allows containment sump level monitors PC002 or PC003 to be used in place of the RF008 monitor to perform the same monitoring function by comparing the change in sump level over a period of time. More specifically, this activity updates the Technical Specification Bases B3.4.15 BACKGROUND to state "The containment sump, used to collect unidentified LEAKAGE, is instrumented to identify leakages of 1.0 gpm within one hour. This sensitivity is acceptable for detecting increases in unidentified LEAKAGE." The Technical Specification Bases B3.4.15 LCO has been modified to state, "The containment floor drain sump flow monitor (RF008) and the reactor cavity sump flow monitor (RF010) are normally utilized to fulfill the containment sump monitor requirement. However, either containment sump level monitor (PC002 or PC003) can be used in place of the containment floor drain sump flow monitor (RF008) by monitoring a change in sump level over a period of time."

Reason for Activity:

The proposed activity provides an alternate method to identify reactor coolant system (RCS) leakage in the event containment floor drain sump flow monitor RF008 becomes inoperable.

Effect of activity:

Based upon the diversity of the containment floor drain sump flow monitor (RF008) and the containment sump level monitors (PC002 and PC003), the change more explicitly identifies those instruments capable to fulfill the TS 3.4.15 containment sump monitor requirements.

Summary of Conclusion for the Activities 50.59 Review:

Considering an accident previously evaluated in the UFSAR, such as a gross failure of the reactor coolant pressure boundary (RCPB), the proposed activity does not result in an increase in the frequency of occurrence of such an evaluated event since the leakage detection monitoring instrumentation is not an initiator of any accident and no new failure modes are introduced. With the properties and attributes of the systems, structures, or components (SSCs) important to safety remaining unchanged, the activity does not introduce an increase in the likelihood of a malfunction of an SSC important to safety previously evaluated in the UFSAR. The consequences of an accident, and in particular those accidents involving the breach of the RCPB such as a LOCA as previously evaluated in the UFSAR, remain unchanged since the proposed activity does not fault any SSC mitigative features used to lessen the consequences of the design basis accident. Since the proposed activity can preserve the containment sump monitoring function in the event RF008 loses its detection function, and the proposed change does not introduce initiators of any new malfunctions of an SSC important to safety previously evaluated in the UFSAR, the consequences of such a malfunction are unchanged by the proposed activity.

50.59 REVIEW COVERSHEET FORM

50.59 Evaluation No.: 6G-01-0035

The proposed activity does not create the possibility of an accident of a different type than previously evaluated in the UFSAR because the activity, being both passive and data gathering in nature, is not an initiator of any accident including those involving the RCPB, and no new failure modes are introduced in performing such an activity. The leakage detection monitoring subsystems associated with this change are non-intrusive to any pressurized retaining fluid boundary. Additionally, the proposed activity does not alter the physical RCPB and does not alter or control mechanisms that may change the RCPB exposed parameters such as RCPB stresses, RCS thermal heat load, or RCS pressure. As such, the acceptance limits for fission product barriers remain preserved. Incorporating the conditions and methods stated or supported currently in the UFSAR and station procedures into the Bases of Technical Specification 3.4.15 does not yield results that are non-conservative or not essentially the same that encompassing the containment floor drain sump flow monitor RF008.

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review		_____	Rev.	_____
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	_____	Rev.	_____
<input checked="" type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	<u>6G-01-0035</u>	Rev.	<u>0</u>
<input type="checkbox"/>	50.59 Validation	50.59 Validation No.	_____	Rev.	_____

Safety Evaluation Summary Form

Tracking No. 6H-01-0017

Activity No. Technical Requirements Manual Change Request 00-018

DESCRIPTION:

A previous revision to Technical Requirements Manual (TRM) Limiting Condition for Operation (TLCO) Section 3.1.k, "Position Indication System – Shutdown (Special Test Exception)" (TRM Change Request 00-013) combined previous Conditions A and B and inadvertently deleted the Condition Notes. This proposed change returns these Condition Notes to Condition A of TLCO 3.1.k. This change is being implemented to clarify the requirements and avoid inappropriate entry into Condition A.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The proposed activity is intended to provide clarification to ensure that Condition A of TRM Special Test Exception TLCO 3.1.k is not inappropriately entered. The proposed activity does not involve a physical alteration to the plant and does not affect the function of any system, structure, or component (SSC). Consequently, the proposed TRM revision will not affect the probability of occurrence of digital rod position indication (DRPI) failures. Furthermore, failure of the DRPI system is not an initiator of any Mode 3, 4, or 5 accident or transient. The DRPI system is not used to monitor a process variable, or the status of any design feature or operating restriction, that is an initial condition of a design basis accident (DBA) or transient. The DRPI system is not part of a primary success path in the mitigation of a DBA or transient. Therefore, the probability of occurrence or the consequences of any accident or transient are not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed activity is intended to clarify the intent of the requirements of TRM TLCO 3.1.k and preclude inappropriate entry into Condition A. The proposed activity does not involve a physical alteration to the plant. No new equipment is being introduced and no installed equipment is being operated in a new or different manner. Consequently, the proposed activity does not affect the function of any SSC and will not result in any changes interactions with other SSCs. There is no change being made to process parameters in how the plant is operated. There are no setpoints, at which protective or mitigative actions are initiated, affected by this change. No alteration in the procedures, which ensure the plant remains within analyzed limits, is being proposed, and no change is being made to procedures relied upon to respond to an off-normal event. Therefore, the possibility of an accident or transient of a different type is not created.

Safety Evaluation Summary Form

Tracking No. 6H-01-0017

Activity No. Technical Requirements Manual Change Request 00-018

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

The proposed TRM wording change is intended to provide clarification of TRM requirements has no affect on any Technical Specification. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

50.59 REVIEW COVERSHEET FORM

LS-AA-104-1001
01/11/01

ation: Byron

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Activity/Document Number: Technical Specification Bases Section B 3.4.1 Revision

Revision Number: 0

Title: Technical Specification Bases Section B 3.4.1

Description of Activity:

The proposed activity will revise the Byron Technical Specification Bases Section B 3.4.1 (RCS Pressure, Temperature, and Flow DNB Limits) to be consistent with the Byron Unit 1 Cycle 11A and Byron Unit 2 Cycle 10A Core Operating Limits Reports (COLRs) (Revision 0) for minimum pressurizer pressure (2219 psig to 2209 psig) Departure from Nucleate Boiling (DNB) limit.

Reason for Activity:

The reason for this change is to revise the Byron Station Technical Specification Bases for the change to the pressurizer pressure DNB limit value and Bases as determined by Nuclear Fuels Management.

Effect of Activity:

The effect of the proposed activity will revise the Technical Specification Bases Section B 3.4.1 to reflect the change in COLR DNB limit for pressurizer pressure. Revising this value will lower the pressurizer pressure limit for entry into Technical Specification Limiting Condition for Operation 3.4.1 for DNB parameters. There is no effect on plant operation as a result of this change.

Summary of Conclusion for the Activities 50.59 Review:

The proposed activity can be implemented with prior NRC review and approval. There is no effect on plant operations as a result of this change. The initial conditions used in analyses have not changed so there is no increase in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety. The proposed activity does not change any equipment, setpoints, or plant operating parameters. Therefore, the possibility of a different type of malfunction of equipment important to safety has not been created. No changes are required to systems, structures, or components as a result of the revised Technical Specification Bases.

Attachments:

- Attach completed Applicability Review if 50.59 Screening is not required.
- Attach completed 50.59 Screening if 50.59 Evaluation is not required.
- Attach completed 50.59 Evaluation if required to be performed.
- Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review		
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	Rev. _____
<input type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	Rev. _____
<input checked="" type="checkbox"/>	50.59 Validation	50.59 Validation No.	Rev. <u>0</u>
		<u>6H-01-0057</u>	

50.59 REVIEW COVERSHEET FORM

LS-AA-104-1001
01/11/01

Location: Byron

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Activity/Document Number: Technical Specification Bases Sections B 3.7.5 and B 3.8.3 and Technical Requirements Manual (TRM) Appendix M Revision

Revision Number: 0

Title: Technical Specification Bases Sections B 3.7.5 and B 3.8.3 and Technical Requirements Manual (TRM) Appendix M Revision

Description of Activity:

The proposed activity will revise Byron Technical Specification Bases Sections B 3.7.5, "AF System", and B 3.8.3, "Diesel Fuel Oil", and Technical Requirements Manual (TRM) Appendix M, "Diesel Fuel Oil Testing Program" to reflect specific revisions of the ASTM standards that are used to perform the required testing for diesel fuel oil. The ASTM standards addresses in this evaluation are:

	Sampling Area	Current	Revised to
1	Particulate Contamination	ASTM D2276	ASTM D5452-98
2	Standard Specifications for Fuel	ASTM D975-81	ASTM D975-98b
3	Sulfur Level	ASTM D1552-79	ASTM D1552-95
4	Sulfur Level		ASTM D4294-98
5	Sulfur Level	ASTM D2622-82	ASTM D2622-98
6	Density and Specific Gravity		ASTM D1298-99
7	Water and Particulate -- Clear and Bright	ASTM D4176-82	ASTM D4176-93
8	Obtaining Samples	ASTM D4057	ASTM D4057-95

Reason for Activity:

The TS Bases and TRM are being updated to accurately reflect the ASTM standards being used to sample and test diesel fuel oil.

Effect of Activity:

The proposed changes do not have any impact on plant operations. The level of fuel quality is not reduced and the proposed changes do not affect the validity of testing results.

Summary of Conclusion for the Activities 50.59 Review:

The proposed activity can be implemented with prior NRC review and approval. The proposed changes do not have any impact on plant operations. The level of fuel quality is not reduced and the proposed changes do not affect the validity of testing results. Using the latest standard takes advantage of enhancements made in testing and sampling techniques. The operation of the diesel generators or auxiliary feedwater pumps is not affected. The initial conditions used in analyses have not changed so there is no increase in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety. The proposed activity does not change any equipment, setpoints, or plant operating parameters. Therefore, the possibility of a different type of malfunction of equipment important to safety has not been created. No changes are required to systems, structures, or components.

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review			
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	_____	Rev. _____
<input type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	_____	Rev. _____
<input checked="" type="checkbox"/>	50.59 Validation	50.59 Validation No.	6H-01-0069	Rev. 0

50.59 REVIEW COVERSHEET FORM

LS-AA-104-1001
01/11/01

Location: Byron

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Activity/Document Number: Technical Requirements Manual Change #02-008

Revision Number: N/A

Title: Technical Requirements Manual (TRM) Change #02-008, TRM Section 3.9.a, "Incore Decay Time"

Description of Activity:

The following TRM changes will be made to reduce the required Incore Decay Time (ICDT) for B2R10 from 100 hours to 57 hours:

TRM Section 3.9.a, "Decay time," states "The reactor shall be subcritical for \geq the last 100 hours (\geq 74 hours for B1R11)." This activity will revise this statement to replace " \geq 74 hours for B1R11" with " \geq 57 hours for B2R10."

TRM Section 3.9.a, Action Condition A states "Reactor subcritical for < 100 hours (< 74 hours for B1R11)." This activity will revise this statement to replace "< 74 hours for B1R11" with "< 57 hours for B2R10."

TRM Surveillance TSR 3.9.a.1 states "Verify the reactor subcritical \geq 100 hours by confirming the date and time of subcriticality. (\geq 74 hours for B1R11)." This activity will change " \geq 74 hours for B1R11." to " \geq 57 hours for B2R10."

Reason for Activity:

It is anticipated that during B2R10, work activities will be completed and the required plant configuration will be established to support commencing movement of irradiated fuel from the reactor vessel to the Spent Fuel Pool (SFP) prior to the current requirement of 100 hours after reactor shutdown.

The spent fuel pool cooling analysis assumes that fuel transfer begins after 100 hours decay time in the reactor core. This evaluation is required to determine if the proposed changes can be made under the provisions of 10 CFR 50.59.

Because past ICDT TRM changes were considered one-time, cycle-specific changes, no UFSAR changes were made. However, since reduction in ICDT is becoming a common practice, DRP 9-066 was completed to permanently change the UFSAR to reflect the option of shorter ICDT's.

(Note: This change does not address the radiological consequences of a Fuel Handling Accident (FHA). The radiological consequences of a FHA have been revised under the Power Uprate (PUR) program using an ICDT of 48 hours. The changes applicable to the FHA did not require review under 50.59, as it was reviewed and approved by the NRC in NRC Letter dated May 4, 2001 to Oliver D. Kingsley (Exelon), Subject: Issuance of Amendments; Increase in Reactor Power, Byron Station, Units 1 and 2, and Braidwood Station, Units 1 and 2.)

Effect of Activity:

The proposed changes will allow starting B2R10 fuel offloading activities earlier than the current 100 hours. This will save time on the critical path for the outages. Occupational dose on the Refueling Machine may increase slightly.

Summary of Conclusion for the Activities 50.59 Review:

Changing the ICDT from 100 hours to 57 hours does not change the frequency of an accident because the proposed change does not increase the failure rate of refueling equipment or increase the risk of a fuel handling accident due to human error. Spent fuel handling tools will not change, nor will the method/procedures for handling spent fuel assemblies. The total number of fuel assemblies to be transferred, and the transfer rate, remains the same. There is no effect on the failure probabilities of the Spent Fuel Pool cooling system.

Revision 000C to calculation BRW-00-0010-M/BYR2000-007 has been performed to evaluate the impact of changing the ICDT. This calculation accounts for margin remaining in the background decay heat load since the SFP is not filled to capacity. The results of this analysis show that the maximum bulk water temperature calculated in the design basis and time-to-boil evaluations is not altered by changing the ICDT from 100 hours to 57 hours for B2R10. In addition, it has been verified that the maximum local water temperature, the maximum fuel cladding temperature and the maximum cladding heat flux remain acceptable.

The design basis spent fuel pool criticality analysis (for the Spent Fuel Re-rack Project) assumes a bulk pool water temperature of 4 °C (39 °F). The proposed change would potentially increase the temperature of the water in the spent fuel pool, thus adding negative reactivity. The spent fuel pool criticality analysis is thus not adversely affected.

There are no dose consequences impacted by this change. The Incore Decay Time associated with radiological concerns (dropped fuel assembly) has been reduced to 48 hours under the PUR program, which has been reviewed and approved by the NRC.

Beginning core alteration and fuel transfer operation as early as 57 hrs after shutdown is not expected to significantly increase the occupational dose. Per UFSAR tables 12.3-1 and 12.3-2, areas in the plant are divided into radiation zones. The design dose rate for each zone is selected to ensure that the exposure limit of 10CFR20 is not exceeded. Shielding is established based on ALARA to minimize the dose rate for the selected areas. The areas affected by the defueling operation is designated as High Radiation area (Zone III) with a design dose rate of > 100 mrem/hr. Access to these areas is controlled in accordance with station procedures and RWP. Electronic dosimeters are required to continuously monitor the dose rate in the areas in order to limit personnel exposure to below 10CFR20 limits. These existing controls are not affected.

The fission product barriers potentially affected by this change are the fuel clad and the Reactor Containment. This change does not result in a change to the internal containment pressure that would represent a challenge to the containment design basis limit of 10 psig. Revision 000C to calculation BRW-00-0010-M/BYR2000-007 shows the calculated maximum fuel cladding temperature remains well below the mean cladding operating temperature of 700 °F (far below the design basis limit of 2,200 °F), and the maximum calculated heat flux for a fuel assembly is a fraction of the required heat flux for Departure from Nucleate Boiling (DNB). Therefore no DBLFPB as described in the UFSAR is being exceeded or altered.

The changes made by this activity represent changes in input parameters to the design basis analysis. Decay heat input to the spent fuel pool was calculated for the earlier ICDT using the method described in NRC Branch Technical Position ASB 9-2. This is the same method used in the existing analysis. Therefore, this activity does not change the method of evaluation described in the UFSAR or in the SER for the Power Uprate Project.

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review			
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	_____	Rev. _____
<input checked="" type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	<u>6G-02-0009</u>	Rev. <u>0</u>
<input type="checkbox"/>	50.59 Validation	50.59 Validation No.	_____	Rev. _____

50.59 REVIEW COVERSHEET FORM**50.59 Validation No.:** 6H-02-0012**Station:** Byron**Activity/Document Number:** Technical Specification Bases Change Request 02-01**Revision Number:** 0**Title:** Technical Specification Bases Section B3.4.15 Revision to Incorporate Containment Sump Level Monitors PC002 and PC003 as an Alternate Means to Monitor Leakage Inside Containment**Description of Activity:**

The proposed activity revises Technical Specification Bases B3.4.15 such that the containment floor drain sump flow monitor RF008 is normally utilized to fulfill the containment sump monitoring requirement per Technical Specification 3.4.15, but allows containment sump level monitors PC002 or PC003 to be used in place of the RF008 monitor to perform the same monitoring function by comparing the change in sump level over a period of time. More specifically, this activity updates the Technical Specification Bases B3.4.15 BACKGROUND to state "The containment sump, used to collect unidentified LEAKAGE, is instrumented to identify leakages of 1.0 gpm within one hour. This sensitivity is acceptable for detecting increases in unidentified LEAKAGE." The Technical Specification Bases B3.4.15 LCO has been modified to state, "The containment floor drain sump flow monitor (RF008) and the reactor cavity sump flow monitor (RF010) are normally utilized to fulfill the containment sump monitor requirement. Alarms are provided to alert the operator of leakages of 1.0 gpm. When the alarm function is not capable of detecting 1.0 gpm of unidentified LEAKAGE within one hour, the containment floor drain sump flow indication may be periodically monitored to ensure capability of detecting 1.0 gpm of unidentified LEAKAGE within one hour. In lieu of the containment floor drain sump flow monitor (RF008), either containment sump level monitor (PC002 or PC003) can be used by monitoring a change in sump level over a period of time such a manner as to ensure the capability of detecting 1.0 gpm unidentified LEAKAGE within one hour."

Reason for Activity:

The proposed activity provides an alternate method to identify reactor coolant system (RCS) leakage in the event containment floor drain sump floor monitor RF008 becomes inoperable, thereby, preventing unnecessary plant transients when acceptable alternate methods are available.

Effect of activity:

The Bases change provides for an acceptable alternate means to monitor leakage inside containment in the event the containment floor drain sump flow monitor (RF008) becomes inoperable. This would prevent any unnecessary administrative plant transients required by current Technical Specification requirements due to RF008 when an acceptable alternate means of monitoring leakage is available.

Summary of Conclusion for the Activities 50.59 Review:

Considering an accident previously evaluated in the UFSAR, such as a gross failure of the reactor coolant pressure boundary (RCPB), the proposed activity does not result in an increase in the frequency of occurrence of such an evaluated event since the leakage detection monitoring instrumentation is not an initiator of any accident and no new failure modes are introduced. With the properties and attributes of the systems, structures, or components (SSCs) important to safety remaining unchanged, the activity does not introduce an increase in the likelihood of a malfunction of an SSC important to safety previously evaluated in the UFSAR. The consequences of an accident, and in particular those accidents involving the breach of the RCPB such as a loss of coolant accident, as previously evaluated in the UFSAR remain unchanged since the proposed activity does not fault any SSC mitigative features used to lessen the consequences of the design basis accident. Since the proposed activity can preserve the containment sump monitoring function in the event RF008 loses its detection function, and the proposed change does not introduce initiators of any new malfunctions of a SSC important to safety previously evaluated in the UFSAR, the consequences of such a malfunction are unchanged by the proposed activity.

50.59 REVIEW COVERSHEET FORM

50.59 Validation No.: 6H-02-0012

The proposed activity does not create the possibility of an accident of a different type than previously evaluated in the UFSAR because the activity, being both passive and data gathering in nature, is not an initiator of any accident including those involving the RCPB, and no new failure modes are introduced in performing such an activity. The leakage detection monitoring subsystems associated with this change are non-intrusive to any pressurized retaining process fluid boundary. The proposed activity does not alter the physical RCPB and does not alter or control mechanisms that may change the RCPB parameters such as RCPB stresses, RCS thermal heat load, or RCS pressure. The acceptance limits for fission product barriers is preserved. Incorporating an alternate method to monitor leakage to the containment floor drain is currently supported by the UFSAR. The requirement to detect a leak before break is still maintained.

Attachments:

Attach completed Applicability Review if 50.59 Screening is not required.

Attach completed 50.59 Screening if 50.59 Evaluation is not required.

Attach completed 50.59 Evaluation if required to be performed.

Attach completed 50.59 Screening and 50.59 Evaluation if discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review			
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.		Rev. _____
<input type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.		Rev. _____
<input checked="" type="checkbox"/>	50.59 Validation	50.59 Validation No.	<u>6H-02-0012</u>	Rev. <u>0</u>

Temporary Modifications (TMOD)

1.	6G-99-0131
2.	6G-99-0145
3.	6G-99-0177
4.	6G-99-0178
5.	6G-99-0239
6.	6H-99-0025
7.	6H-99-0250
8.	6H-99-0348
9.	6H-99-0390
10.	6H-01-0047

Safety Evaluation Summary Form

Tracking No. 6G-99-0131
Activity No. TMOD 99-0-038

DESCRIPTION:

The proposed temporary modification (TMOD) will remove a 10 foot section of pipe from the fire hydrant slip joint to the closest flange. This flange will be blanked off until parts for repair of fire hydrant 0FP19S can be obtained.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The Fire Protection (FP) system is not an initiator of any accidents or transients; therefore, there is no increase in the probability of occurrence of an accident or transient. The non-safety-related portion of the FP system is not assumed to mitigate the consequences of any accidents or transients. 0FP19S is located outside the protected area. Therefore, isolating 0FP19S from the outside fire header will not increase the consequences of any accident or transient. Flushing the outside fire header using 0FP18S will provide a flush equivalent to using 0FP19S, because 0FP18S is located just upstream from 0FP19S. Since the FP system will still operate as designed, there is no potential increase in dose consequences.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

Isolating 0FP19S from the outside fire header, outside the protected area, will not create the possibility of an accident or transient of a different type. The blank flange will provide isolation equivalent to 0FP19S and the remaining portion of the outside fire header will continue to operate and provide protection as designed. Flushing the outside header using 0FP18S is equivalent to using 0FP19S, because 0FP18S is just upstream of 0FP19S.

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

Although the FP system is not described in the Technical Specifications, it is described in the Technical Requirements Manual. The temporary blind flanging of 0FP19S allows the upstream hydrant and sprinkler systems to remain functional to protect Warehouses 3, 4, 5, and 6. Warehouse 7 no longer exists, and therefore, 0FP19S is no longer required to provide protection.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0145
Activity No. TMOD 99-1-028

DESCRIPTION:

This temporary modification (TMOD) installs monitoring equipment that provides a means to remotely monitor reactor coolant pump (RCP) 1B #2 seal leakoff flow. This involves the installation of a camera, power supply, and cables in containment as well as cables in the auxiliary building, a TV monitor in the Shift Engineer's office, and cable communication converters. While the equipment passes a low level signal through a spare containment electrical penetration, the equipment does not interface with any other systems, structures, or components (SSCs) assumed to function during postulated accidents. The equipment itself will not be used to mitigate any design basis accidents or transients.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The remote monitoring equipment provides a means to monitor RCP seal performance and does not interface with any SSCs assumed to function before, during, and after an accident condition. This equipment will not be used to mitigate any design basis accident. Therefore, the probability of occurrence of the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The equipment is installed such that no possible interactions with SSCs can result from the installation, operation, or the failure of this equipment. Therefore, no new failure modes are created that could impact accident or transient conditions. Since there is no interaction with SSCs important to safety, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The function of this TMOD is not referenced in any way as the basis for any Technical Specification. Therefore, the margin of safety is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0177
Activity No. TMOD 99-2-032

DESCRIPTION:

Temporary modification (TMOD) 99-2-032 provides temporary power to the Unit 2 polar crane (2HC01G) from the Unit 1 polar crane feed at motor control center (MCC) 133X6 while Bus 243 is out of service during refueling outage B2R08. For the duration of this TMOD, the Unit 1 polar crane is not available for use and the Unit 2 polar crane can not be used if both control rod drive mechanism (CRDM) exhaust fans 1VP03CA and 1VP03CD are required. Additionally, the Unit 2 crane main and auxiliary hoists cannot be operated simultaneously.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

No accidents are identified as a result of this TMOD because the installation criteria precludes interaction with any equipment required to mitigate the consequences of an accident. The Unit 1 penetration protection is used to protect the corresponding Unit 2 penetration. This protection is still in accordance with UFSAR Figure 8.1-1 Sheet 16 and the penetration is considered an unchanged component for this TMOD. This TMOD does not interact with any equipment important to safety to the extent that operation would be adversely affected. The penetration for Unit 2 is protected as required under the original design; therefore, its ability to maintain containment integrity is unaffected. Connecting 2HC01G to MCC 133X6 does not affect the probability of an occurrence of any malfunction since the breakers on Unit 1 will sense a fault in the same manner whether the Unit 1 or Unit 2 polar crane is connected to them. Installation of this TMOD does not affect the availability of components of any emergency core cooling systems assumed in the safety analysis or their ability to meet their safety function. Therefore, the consequences are not increased. The use of the Unit 2 polar crane as fed from MCC 133X6 is not assumed or credited to reduce offsite dose during normal operation or following any design basis accident or transient on Unit 1 or Unit 2.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The installation of this TMOD does not create any new accidents or transients. Polar crane loss of power is not an initiator of any fuel handling event. No additional credible accidents or transients can occur on either unit due to this change. The use of the same protection scheme for the Unit 2 polar crane as existed for the Unit 1 polar crane for the installation of this TMOD results in no

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0177
Activity No. TMOD 99-2-032

change in the type of malfunction of equipment important to safety as originally evaluated. The ability of the penetration to maintain containment integrity is unaffected by a change in power source. Administrative control of the use of the Unit 2 polar crane will prevent any adverse conditions on the Unit 1 MCC, thus preventing any different type of malfunction on Unit 1.

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

The function of this TMOD is not referenced in or applicable to any Technical Specification. Therefore, the margin of safety is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0178
Activity No. TMOD 99-2-034

DESCRIPTION:

This temporary modification (TMOD) will block the 2A motor-driven feedwater pump discharge control valve (2FW016) valve in the open position to allow maintenance to be performed on the valve positioner. The valve is currently failed in the full open position. The valve block is necessary to perform repairs on the valve positioner which has malfunctioned.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

One feedwater control valve is assumed to malfunction resulting in a step increase to 129.46% of nominal feedwater flow to one steam generator for the limiting feedwater control valve accident at full power. This temporary modification will have no impact on the probability of a feedwater control valve failing in such a manner. The proposed modification will have no impact on the consequences of any accidents or transients. The affected components are not used for mitigation of consequences. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

There are no additional credible transients or accidents that can occur as a result of the installation of the valve block. A complete loss of feedwater and an increase in feedwater flow have been previously evaluated. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There are no Technical Specifications affected by the installation of this temporary modification. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0239
Activity No. TMOD 99-2-046 and DCP 9900368

DESCRIPTION:

This temporary modification (TMOD) removes the air actuator to repair essential service water (SX) 2A containment refrigeration unit bypass valve 2SX147A. The air operator will be removed from the valve while an engineered blocking device is mounted on the valve body, effectively locking the valve stem in place. The actuator will be removed while the valve is in its fully opened position, therefore locking the valve open by virtue of the blocking device.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The ability of the SX system to mitigate the consequences of any accidents is not changed by locking the 2SX147A valve in its open position. Two independent trains of containment cooling are still operable to mitigate all accident scenarios; therefore, the consequences of any accident are not changed. By removing the air operator from the valve, the potential for a new type of accident or malfunction is not created because this proposed activity places the fail open 2SX147A valve in its fail safe position consistent with SX system design. There are no UFSAR sections or Technical Specifications that require this valve to achieve a closed position. The required system functions and operating requirements as defined in the Technical Specifications do not change.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

By removing the valve actuator and locking the 2SX147A valve in the open position a new type of accident or malfunction is not created because this valve is required to achieve a fully open position to support post accident operation of that train of reactor containment fan coolers (RCFCs). There are no UFSAR sections or Technical Specifications that require this valve to achieve a closed position. The required system functions and operating requirements as defined in the Byron Technical Specifications do not change.

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

The function of the RCFC system is to cool and dehumidify the containment under normal and accident conditions. The RCFC system consists of two redundant trains each powered from a separate safety related bus. During normal operation,

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Safety Evaluation Summary Form

Tracking No. 6G-99-0239
Activity No. TMOD 99-2-046 and DCP 9900368

the primary refrigeration unit bypass containment refrigeration unit inlet valves and outlet valves are open and the bypass valve functions as a modulating valve. In emergency conditions, the inlet and outlet valves close and the bypass valve moves to the full open position. As this temporary modification essentially results in the placement of the 2SX147A valve in its fail safe position, the margin of safety as described in the Technical Specification basis is not affected. In addition, the associated SX train is not impacted because all safety related heat loads which are required to be supplied with cooling flow are not affected. The catastrophic failure of this temporary alteration will not disable the affected SX train. Also, the 100% capacity opposite SX train will still be operable and available to remove decay heat following a design basis accident.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0025
Activity No. TMOD 99-2-004

DESCRIPTION:

The proposed temporary modification (TMOD) installs a blocking device on valve 2FW002C (2C Feedwater (FW) pump discharge stop check valve) to allow overhaul of the actuator. The valve will be blocked in the closed position to provide a system pressure boundary and to maintain the valve in the fail-safe position. The 2C FW pump will be removed from service during the performance of the maintenance activity.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The probability of a loss of feedwater accident or equipment malfunction is not increased since the affected feedwater pump is removed from service and no other equipment important to safety is affected. The consequences of this accident or any equipment malfunction are not affected since none of the systems used for mitigation, such as auxiliary feedwater, are affected.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The 2C FW pump will be removed from service for the duration that the temporary modification is installed and stop check valve 2FW002C is required to remain in the closed position. The valve block is equivalent to the normal valve actuator with regard to this function. The valve is in the fail-safe position. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The proposed change does not affect any parameters upon which Technical Specifications are based because the FW system is not required to provide safe shutdown capability for the plant and this activity does not impact any systems, structures or components required for safe shutdown operation. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0250
Activity No. TMOD 99-0-024 Revision 1

DESCRIPTION:

The proposed change to the temporary modification (TMOD) changes the location of a temporary tee to allow sampling the Unit 1 volume control tank (VCT). A temporary tee was originally installed to allow gas decay tank grab samples to be taken while power was removed from the waste gas header sample valves and automatic gas analyzer. The proposed change moves the temporary tee so oxygen concentration can be monitored while the 1B centrifugal charging pump minimum flow path is aligned to the VCT.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The probability of occurrence or the consequences of any transient or accident described in the safety analysis report (SAR) is not increased by this change. The ability to provide safe shutdown of the plant is not affected. This change does not create any new accident initiators. The failure modes and effects of the waste gas (GW) system are not impacted by this activity. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the SAR is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The potential for a new type of accident or malfunction is not created. The system functions are not changed and chemistry sampling will still be procedurally controlled. Therefore, this proposed change does not create the possibility of an accident or malfunction of a type different from those evaluated in the SAR.

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

The GW system is not part of the Byron Technical Specifications. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0348
Activity No. TMOD 99-0-030 Revision 1

DESCRIPTION:

The proposed activity revises Temporary Modification (TMOD) 99-0-030 Revision 0 to include the installation of a temporary hose from a temporary tank located outside the chemical tank room to the suction non-essential service water (WS) system chemical addition pumps 0WS06PA and 0WS06PB. BCP 700-14 will be updated for operating the chemical addition pumps and connection of the temporary tank to the chemical addition pumps.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety is not increased because the WS system provides heat removal for the balance of plant equipment. The proposed activity provides chemical addition to the WS system will not affect the operation of the system. No equipment important to the safe shutdown of the reactor is served by the WS system. The WS system is non-safety related since all essential loads, and those required for the safe shutdown of the reactor, are served by the essential service water system (SX). Accordingly, the WS system is designated Safety Category II, Quality Group D and none of the loads served by WS affect the safety of the plant.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

No accidents or malfunctions of a different type than any evaluated previously in the safety analysis report will be created by the proposed change to the facility. The proposed change, the addition of temporary equipment to connect a chemical storage system to the WS system, will not affect the operation of the WS system. Therefore, no new failure modes are created by the proposed change.

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

Technical Specifications are not affected as the WS system provides heat removal for the balance of plant equipment. No equipment important to the safe shutdown of the reactor is served by the WS system. The WS system is non-safety related since all essential loads, and those required for the safe shutdown of the reactor, are served by the SX system. Accordingly, the WS system is designated Safety

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Safety Evaluation Summary Form

Tracking No. 6H-99-0348
Activity No. TMOD 99-0-030 Revision 1

Category II, Quality Group D. None of the loads served by WS affect the safety of the plant. Therefore, the margin of safety as described in the basis for any Technical Specification is not affected.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0390
Activity No. TMOD 99-2-039

DESCRIPTION:

The proposed temporary modification (TMOD) will disable the trolley end of travel limit switch for the Unit 2 polar crane (2HC01G) to allow it to travel closer to the containment building wall. The mechanical limits will now be limiting the movement of the polar crane as opposed to the electrical limit switch. However, administrative control in the form of a card on the control switch and awareness training with each crane operator will be used to prevent the trolley from powering into the end stops. An additional spotter is not necessary because the limit being disabled is physically nearest the crane operator; therefore, the crane operator is able to see the trolley movement in relation to the approximate location of the limit switch. The limit switch is approximately two to three feet from the end stop. This TMOD may be installed for any activity that requires the polar crane hoist to achieve a position closer to the containment wall in order to support outage activities.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The TMOD will disable the trolley end of travel limit switch for the reverse direction to allow the hoist to be brought closer to the containment wall for lifting various loads during the outage. This TMOD will only be in affect for lifting non-critical loads. This TMOD will not be installed during the lifting of critical loads and will not affect operation of the trolley away from the limit switch toward the center of containment. Since the failure of the limit switch could result in powering into the end stops, administrative controls will prevent powering into the end stops for the trolley; therefore the TMOD will not increase the probability of occurrence of a malfunction of equipment important to safety. The TMOD will not be installed while lifting or moving any critical loads and will not affect the operation of the polar crane over the reactor vessel. Therefore, vessel, fuel, and internals integrity will not be adversely affected by the removal of the limit in the reverse direction for the trolley. Lifting and lowering loads closer to the containment wall will be allowed based on the disabling of the track limit switch but this will not increase the consequences of a malfunction of equipment important to safety.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

During refueling, the function of the polar crane is to remove the reactor vessel head and upper internals assembly. The only critical loads carried by the polar crane are the reactor vessel head and upper and lower internals. There are no

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0390
Activity No. TMOD 99-2-039

other loads, which if dropped, would affect the cooling of the reactor or fuel integrity. When carrying the reactor vessel head, the operator is restricted in movement to the north-south directions by the high walls enclosing the steam generators. The results of a load drop analysis for the RESAR-414 docket were provided in WCAP 9198, January 23, 1978. A load drop analysis for Byron would be very similar to that analysis. This TMOD will not be installed while lifting the above described critical loads; therefore, the change will not impact the analysis. The TMOD allows loads located closer to the containment wall to be lifted and lowered but the operation of the trolley away from the wall is unchanged. Therefore, the possibility of an accident or transient different than previously evaluated is not increased. The TMOD will not be installed while lifting or moving any critical loads and will not affect the operation of the polar crane over the reactor vessel. Therefore, vessel, fuel, and internals integrity will not be adversely affected by the removal of the limit in the reverse direction for the trolley. Lifting and lowering loads closer to the containment wall will be allowed based on the disabling of the track limit switch but this will not increase the consequences of a malfunction or equipment important to safety in Modes 5, 6, or defueled.

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

The polar crane trolley or trolley track limit switch is not discussed in the basis for any Technical Specification. The penetration protection Technical Requirements Manual Section 3.8.a for the polar crane power feed is not affected because the power supply and its protection is not modified by this TMOD. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

50.59 REVIEW COVERSHEET FORM

LS-AA-104-1001
01/11/01

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Activity/Document Number: Temporary Modification DCP 9901021

Revision Number: 0

Title: Remove Cable From Preamplifier Circuit for 2NR13EB (Post Accident Neutron Monitoring System) Due To Potential Moisture Build-up Within Cable

Description of Activity:

This proposed activity (temporary modification) disconnects the cables for the detector section normally connected to the A3 and A4 preamplifier. It then reconnects the normal A3 cable to the A4 preamplifier. This configuration will allow full-scale output on the wide range indication and reduced output on the source range indication (the source range normally utilizes two detector inputs).

Reason for Activity:

This temporary modification is being performed due to noise in the cable that was originally connected to the A4 preamplifier. The noise is due to moisture in the cable. The cable may not be repaired in time to support refueling outage B2R09 fuel moves or unit startup.

Effect of Activity:

The effect of this temporary modification configuration will be to allow full-scale output on the wide range indication and half scale output on the source range indication.

Summary of Conclusion for the Activities 50.59 Review:

The source range monitors are not initiators of any accident. There is no increase in the consequences of an accident or a malfunction of an SSC important to safety as previously evaluated in the UFSAR because the modified source range channel only provides a monitoring function which it is still able to perform. This activity cannot create the possibility of an accident of a different type or a malfunction with a different result than previously evaluated in the UFSAR. This activity will not result in exceeding or altering a design basis limit for a fission product barrier. No methods of evaluation are changed by this activity.

Attachments:

- Attach completed Applicability Review if 50.59 Screening is not required.
- Attach completed 50.59 Screening if 50.59 Evaluation is not required.
- Attach completed 50.59 Evaluation if required to be performed.
- Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review		
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	Rev. _____
<input type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	Rev. _____
<input checked="" type="checkbox"/>	50.59 Validation	50.59 Validation No.	Rev. <u>0</u>
			6H-01-0047

Temporary Shielding Requests (TSR)

1.	6H-99-0097
2.	6H-99-0126
3.	6H-99-0134
4.	6H-99-0135
5.	6H-99-0136
6.	6H-99-0138
7.	6H-99-0141
8.	6H-99-0148
9.	6H-99-0152
10.	6H-99-0153
11.	6H-99-0165
12.	6H-99-0166
13.	6H-99-0167
14.	6H-99-0168
15.	6H-99-0169
16.	6H-99-0175
17.	6H-99-0198
18.	6H-99-0200
19.	6H-99-0201
20.	6H-99-0208
21.	6H-99-0210
22.	6H-99-0213
23.	6H-99-0215
24.	6H-99-0218
25.	6H-99-0222
26.	6H-99-0224, Revision 1
27.	6H-99-0228
28.	6H-99-0233
29.	6H-99-0238
30.	6H-99-0248
31.	6H-99-0301
32.	6H-99-0380

Safety Evaluation Summary Form

Tracking No. 6H-99-0097
Activity No. TSR 99-017

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on lines 1SI05DA-6" and 1SI05DB-6" (Engineering Request 9808077).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0126
Activity No. TSR 99-022

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on line 1RC35AA-6" (Engineering Request 9902838).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

Safety Evaluation Summary Form

Tracking No. 6H-99-0134
Activity No. TSR 99-023

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on valve 1RC8002A during Modes 5, 6 or a defueled condition (Engineering Request 9902966).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0135
Activity No. TSR 99-024

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on lines 1RC02AA and 1RC03AA during Mode 5, 6 or defueled conditions (Engineering Request 9902967).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0136
Activity No. TSR 99-025

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on line 1RC21AA during Mode 5, 6 or defueled conditions (Engineering Request 9902968).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0138
Activity No. TSR 99-028

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding from 401' elevation grating inside the Unit 1 containment missile barrier near valve 1RC8002A (Nuclear Design Information Transmittal BYR98-102-1).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

Safety Evaluation Summary Form

Tracking No. 6H-99-0141
Activity No. TSR 99-026

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on the bonnet stand for the 1A Loop Stop Isolation valve during Mode 5, 6 or defueled conditions (Engineering Request 9902969).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0148
Activity No. TSR 99-044

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on line 1CV01E-3" (Engineering Request 9903144).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0152

Activity No. TSR 99-034

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding in the area at the Unit 2 reactor head (Engineering Request 9901258).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0153
Activity No. TSR 99-036

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding for the Unit 2 containment Steam Generator A/D and B/C platforms on elevation 390' (Engineering Request 9901260).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0165
Activity No. TSR 99-037

DESCRIPTION:

The proposed activity reviews the installation of temporary lead shielding hung on the 401' elevation grating inside the containment missile barrier (Engineering Request 9901261).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0166

Activity No. TSR 99-038

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding hung on the radial arm hoists on Unit 2 reactor head (Engineering Request 9901262).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The effect of additional load is addressed by the Engineering evaluation and has been found to be acceptable and the lead shielding will reduce dose in the affected area. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0167

Activity No. TSR 99-039

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on the walkway and handrail (up to the first horizontal rail) of the fuel handling manipulator crane at elevation 426' in Unit 2 containment (Engineering Request 9901263).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

Safety Evaluation Summary Form

Tracking No. 6H-99-0168
Activity No. TSR 99-040

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on lines 2SI05DA-6" and 2SI05DB-6" (Engineering Request 9901264).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0169Activity No. TSR 99-021DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on line 2CVB2CB-2" and valve 2CV8523B.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0175
Activity No. TSR 99-049

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on valve 2RH8701B and the associated piping (line numbers 2RH01AA and 2RC04AA) at elevation 390' in Unit 2 containment (Engineering Request 9903370).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

Safety Evaluation Summary Form

Tracking No. 6H-99-0198

Activity No. TSR 99-045

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on lines 2CV02D, 2CV02F, and 2CV02G (Engineering Request 9903296).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0200
Activity No. TSR 99-046

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on line 2RC35AA (Engineering Request 9903367).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0201

Activity No. TSR 99-047

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on the 2D reactor coolant pump motor (Engineering Request 9903368).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

Safety Evaluation Summary Form

Tracking No. 6H-99-0208

Activity No. TSR 99-031

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on the reactor coolant loop by-pass lines (Engineering Request 9901254).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0210

Activity No. TSR 99-052

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on line 1RC21BB.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0213Activity No. TSR 99-035DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on lines 2CVB7A, 2CVB7BB, and 2CV01B (Engineering Request 9901259).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0215
Activity No. TSR 99-033

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on line 2RY11A-14" (Engineering Request 9901258).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0218Activity No. TSR 99-030**DESCRIPTION:**

The proposed activity reviews installation of temporary lead shielding on lines 2RC24AA-4', 2RC24AB-4', 2RY01AA-4", 2RY01AB-4", and 2RY01B-6" (Engineering Request 9901253).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0222
Activity No. TSR 99-041

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding hung on the 390' elevation grating inside the missile barrier of Unit 2 containment (Engineering Request 9901265).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0224 Revision 1
Activity No. TSR 99-053

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on lines 1SI34A-8", 2SI34A-8", 1SI05AB-8", and 2SI05AB-8" lines to support installation of emergency core cooling system (ECCS) vent valves (Engineering Request 9904766).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The shielding installation has been evaluated in calculation BYR 99-064. The calculation also evaluated the installation of the "hot tapping" machine in conjunction with the lead shielding, and determined that it is acceptable. However, for Unit 1 only, the lead shielding will not be acceptable following transfer from the Injection mode to the recirculation mode, due to increased thermal load on the piping. Therefore, in the unlikely event of an ECCS actuation, the shielding shall be removed on Unit 1 side piping prior to transfer to the recirculation mode. Instructions for this contingency are incorporated in the temporary shielding package. This contingency is acceptable because the individual(s) will be dedicated, the appropriate removal tools will be available, and there is reasonable assurance that the shielding can be removed prior to transfer to the recirculation mode. Therefore, there is no increase in the probability or consequences of an accident or malfunction due to the acceptable calculations and the contingencies put in place.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

Contingencies will be in place to ensure removal of the lead shielding. The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable with the noted contingencies in place. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety for any Technical Specification since the ECCS piping will remain operable as discussed above.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0228
Activity No. TSR 99-048

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on lines 2RC04AB-12", 2RH01AB-12" and valve 2RH8702B (Engineering Request 9903369).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0233
Activity No. TSR 99-050

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on line 2CV01E-3" (Engineering Request 9903371).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

Safety Evaluation Summary Form

Tracking No. 6H-99-0238
Activity No. TSR 99-034 Revision 1

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding for the Unit 2 reactor head (Engineering Request 9904234).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0248Activity No. TSR 99-054DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding on lines 2RC29AC-10", 2RC29AD-10", 2SI09BA-10", 2SI09BC-10", and 2SI09BD-10" (Engineering Request 9905044).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0301
Activity No. TSR 99-055 Revision 1

DESCRIPTION:

The proposed activity reviews installation of temporary lead shielding for a leak on the 2A residual heat removal pump casing (Engineering Request 9906061).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the location where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0380
Activity No. TSR 99-051

DESCRIPTION:

The proposed activity reviews the installation of temporary lead shielding on lines 1RH09AB-8" and 1RH03AB-8" and valves 1RH607 and 1RH619 (Engineering Request 9808077).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The results of the Engineering evaluation performed for the effect of the additional load of the temporary shielding has been found acceptable. The addition of the lead shielding will reduce dose. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

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

There is no impact on the margin of safety, as defined in the basis for any Technical Specification, as the portion of piping where the shielding is installed is acceptable for the added shielding.

PEPP-E FORM

Miscellaneous

1.	6G-99-0001
2.	6G-99-0027
3.	6G-99-0054
4.	6G-99-0063
5.	6G-99-0120
6.	6G-99-0142
7.	6G-99-0180
8.	6G-99-0187
9.	6G-99-0201
10.	6G-99-0202
11.	6H-99-0051
12.	6H-99-0052
13.	6H-99-0061
14.	6G-00-0082
15.	6H-00-0194
16.	6G-01-0013
17.	6G-01-0020, Revision 1
18.	6H-01-0026
19.	6H-01-0027
20.	6H-01-0038
21.	6H-01-0055

Safety Evaluation Summary Form

Tracking No. 6G-99-0001
Activity No. Abnormal Component Lineup for Ventilation Filters

DESCRIPTION:

The proposed activity evaluates temporarily removing the auxiliary building ventilation (VA) outside air intake filters. The filters are required to be removed because the filters became plugged with snow during a snowstorm. The filters will be reinstalled as soon as new filters can be acquired and/or the existing filters dry out enough for reinstallation. The expected duration for the reinstallation of the filters is a few days to two weeks.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The affected accidents are a LOCA and fuel handling building accident. The removal of the filters has no impact on initiating a LOCA accident. The filters are used to filter outside air to prevent dust/dirt from entering the auxiliary building. These filters do not affect the reactor coolant system. The fuel handling or non-accessible exhaust systems are not affected. Therefore, the probability of occurrence of the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The affected filters are classified as non-safety related and cannot affect the operation of any other plant equipment. Their function is to prevent long term buildup of dust/dirt in the auxiliary building. The removal of the filters for the expected duration will not have any noticeable effects on the plant. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The filters being removed are not related to any Technical Specification requirements. The filters are non-safety related. The Technical Specification portions of the ventilation and fuel handling exhaust systems are not affected in any way. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0027

Activity No. Operation of Auxiliary Feedwater Pump Battery Chargers

DESCRIPTION:

The purpose of this activity is to change the operation of the 2B auxiliary feedwater (AF) pump battery chargers from automatic to manual for a limited amount of time to allow for maintenance and repairs of battery charger. This will be done while the AF pump is maintained operable. The automatic control function of the battery chargers offers regulation of AC input voltage fluctuations while maintaining DC output voltage constant. This automatic function is not essential for the ability of the chargers to fulfill the support function of the AF pump.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The failure of the AF pump is not a precursor or initiator of any accident or transient, therefore, the probability of occurrence of an accident or transient is not increased. The AF pump is still capable of performing the required safety function with no degradation in performance. The pump will start on demand and the batteries will be maintained at full charge which allows the pump to continue to run. Therefore, there is no increase in probability of occurrence or the consequences of an accident due to this proposed activity.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed activity is a change to an alternate operational mode of the battery chargers which has no impact on the function of the batteries. No adverse affects to the AF system will occur as a result of this change. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The proposed activity does not affect the ability of the AF system to perform its required safety function under all accident and transient conditions. Operating the battery chargers in manual will still ensure the batteries are available and capable of starting the AF pump when required. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0054

Activity No. Abnormal Valve Lineup for 0AB8492

DESCRIPTION:

0AB8492 has failed open with the valve stem separated from the valve. The valve is diaphragm seated. The valve will be left in its current position until repairs can be performed. The operational configuration occurrence is a condition in which the plant configuration change disagrees with the expected configuration of plant as documented in plant procedures and drawings. The valve will be maintained in the current failed open position to allow for continued boric acid batching until repairs can be completed.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The batching tank isolation valve, 0AB8492, is not safety related. The boric acid storage concentration will remain in accordance with Technical Requirements Manual requirements. The transfer pump is not started until sufficient time has passed to ensure all of the boric acid is in solution per station procedures. If leakby were to occur, the boric acid solution in the pipe would have sufficient time to dissolve prior to starting the transfer to the boric acid tank.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The batching tank provides a means to dissolve boric acid and prepare a predetermined concentration of boric acid to transfer to the boric acid tank. The only possibility of a new failure is if the failed valve does not provide proper isolation of the batching tank. However, alternate isolation is available. The affect on the system if boric acid solution leaked by the first isolation valve would be filling the pipe to the next isolation valve with highly concentrated borated water. The system is heat traced to prevent boric acid from plating out so the acid would dissolve and be sent to the boric acid tank when the transfer pump was started as designed.

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

The position of 0AB8492 is not assumed in the basis of Technical Specifications. The capability to provide 4-wt% boric acid for reactivity manipulations is not affected.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0063
Activity No. WR 990033818

DESCRIPTION:

Install a mechanical restraint device on the refueling machine to prevent a fuel assembly from falling onto the lower core plate.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The mechanical cable clamp will not adversely affect the ability of the manipulator crane to support the fuel assembly or, by its removal allow fuel assembly placement into the core. None of the mitigation systems for the fuel handling accident are affected.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The mechanical device is attached to the manipulator crane where it provides a restraint function and can be quickly removed if assembly lowering is required. The Train B residual heat removal train, which is operating during the installation period, takes its suction from the 1C hot leg on the opposite side of the core from the proposed activity and will not be affected.

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

No Technical Specification or Technical Specification Bases define a margin of safety for this Mode 6 refueling activity.

Safety Evaluation Summary Form

Tracking No. 6G-99-0120
Activity No. OOS 980014805

DESCRIPTION:

Out of Service (OOS) 980014805 maintains the 0B Essential Service Water (SX) blowdown valve (0SX161B) closed until testing of DCP 9700732 is complete. The OOS also places in Information Card on the 0A SX blowdown valve (0SX161A) to maintain that valve a maximum of 6 turns open per BOP SX-13.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

Maintaining the SX blowdown isolation valves less than full open has no effect on any accident or transient initiators. Acceptable chemistry parameters continue to be maintained in the system thus there is no negative affect on the SX system.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

There are no operability requirements, or design basis assumptions, related to maintaining SX blowdown flow. The ability to completely isolate SX blowdown flow is not compromised by the out of service conditions. The current status of the SX blowdown isolation valves has no impact on any existing or new accident or transient initiators.

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

There are no Technical Specification requirements for maintaining SX blowdown flow; therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0142
Activity No. WR 990067703

DESCRIPTION:

The proposed activity (Work Request 990067703) will temporarily install a portable gantry crane in the 212 battery room. The gantry crane will be used to remove and replace a cell of the 212 battery. The crane will be secured to the structural framing members of the battery rack to prevent adverse seismic interaction of the crane with the battery when unattended.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The probability of an accident is not increased since the batteries are not an initiator for any accidents. The probability of all accidents previously analyzed will remain unchanged. Installation and use of the crane by a trained individual, using written instructions with appropriate cautions, will ensure that the battery is not damaged. Requirements provided will ensure that seismic forces do not cause a loss of battery function.

The consequences of an accident are not increased. NDIT BYR-99-158 provides the requirements to properly use and secure the portable gantry crane to ensure that the battery is not adversely affected. During the actual battery replacement phase of the activity the battery will be considered inoperable. At all other times, the battery will continue to function as designed to mitigate the consequences of all analyzed transients and accidents.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

Securing the portable gantry crane will ensure that the effects of a seismic event will not create the possibility of an accident or transient different than any previously evaluated. In addition, use of the crane to lift loads over the batteries is restricted to that period when the battery is considered inoperable. As discussed in NDIT BYR-99-158 the seismic qualification of the battery and rack (Calculation 7.16.10.2-BYR97-342 Revision 1) is not adversely affected by temporarily securing the crane.

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

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0142
Activity No. WR 990067703

Securing and use of the portable gantry crane does not reduce the margin of safety as described in the basis for the Technical Specifications. The battery will continue to meet its design requirements to mitigate the consequences of all analyzed transients and accidents. The seismic qualification of the batteries will not be affected by temporarily securing the gantry crane to the battery rack members. The seismic qualification of the battery and rack (Calculation 7.16.10.2-BYR97-342 Revision 1) indicates adequate margin in the structural capacity remains for seismic integrity of the battery. During the replacement phase of the battery, the battery will be considered inoperable and the appropriate Technical Specification will be entered.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0180
Activity No. NDIT BYR 99-179 Revision 1

DESCRIPTION:

The proposed activity (Nuclear Design Information Transmittal (NDIT) BYR 99-179 Revision 1) provides guidelines for staging temporary lead shielding blankets inside the Unit 2 containment during Mode 1 prior to refueling outage B2R08. The temporary lead shielding (blankets) will be removed from the Unit 2 containment prior to Mode 4 startup from B2R08. The amount of shielding will be limited to 18,000 pounds and will be located on elevations 401' and 412'.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The lead blankets will be stored on elevations 401' and 412' in an area that will be sufficiently removed from any safety related systems and components, and therefore will not affect equipment failures or malfunctions. The structure has been evaluated for added weight due to the lead blankets and is found to be acceptable. No new failure mode is created due to the temporary staging (at the specified locations) of the blankets inside the containment.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

All issues related to the lead blankets inside the containment have been evaluated and found to be acceptable. The staging of lead blankets on elevations 401' and 412' at the specified locations will not create an accident or transient of a different type.

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

No Technical Specification is directly impacted by this change. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0187
Activity No. NDIT BYR-99-206

DESCRIPTION:

The proposed activity (Nuclear Design Information Transmittal (NDIT) BYR-99-206) stages miscellaneous outage tools and equipment (not including scaffolding and lead shielding) inside containment prior to refueling outage B2R08. These items will be staged such that they have no potential to impact the operation of the plant during normal operating conditions as well as accident conditions.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The staging of outage materials in the Unit 2 containment will not increase the probability of any accident or transient or malfunction of equipment and will not increase or affect off-site dose since materials will be stored in closed containers which will be located or secured to prevent any interaction with safety-related equipment. In addition, the staged materials do not interface with any plant systems. No potential of sump blockage or seismic interaction will occur. No additional potential for generation of combustible gas due to reactive materials will occur since these materials are stored inside containers to protect them from caustic containment spray. Also, the effect on passive heat sinks in containment can cause an increase in peak clad temperatures. This increase was evaluated and is considered bounded by current analyses.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The staging of outage materials in the Unit 2 containment will not create an accident or malfunction of a different type than previously evaluated since the requirements provided by NDIT BYR-99-206 provide the necessary controls to prevent introduction of materials that can adversely affect the containment environment. These materials will be located in an area that does not contain safety-related equipment or will be secured and does not change the design function of any systems or components.

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

The reduction in free containment volume has been determined to be negligible. Also, the effect of the increase in passive heat sinks is bounded by the current analysis.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0201
Activity No. NDIT 99-231

DESCRIPTION:

The proposed activity (Nuclear Design Information Transmittal (NDIT) 99-231) provides guidelines for the installation of two lead shielding containers inside the Unit 2 containment following refueling outage B2R08. The amount of shielding will be limited to 12000 pounds and will be located on elevation 426'. The metal containers shall not be placed within 12 inches of any safety-related equipment.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The effects on systems or components as a result of the temporary installation of the lead shielding and containers were evaluated and were found acceptable. The installation of temporary lead blankets will not degrade the performance of any safety-related system or challenge the safety-related functions of any system. The lead blankets and its container will be located in an area that will be sufficiently removed from any safety-related systems or components. Also, since the lead blankets will be located above the 75 inch flood height and in a closed metal container, it is not considered that the blanket material will break apart and cause blockage to the containment recirculation sumps. The addition of lead blankets (passive heat sinks) in containment can cause an increase in peak clad temperatures. This increase was evaluated and is considered insignificant for the storage of the lead blankets.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The temporary lead blankets and two metal containers on elevation 426' will be located in an area that does not contain safety related equipment and does not change the design function of any systems or components. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

Technical Specifications are not affected by the proposed change. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0202
Activity No. NDIT BYR-99-232

DESCRIPTION:

The proposed activity (Nuclear Design Information Transmittal (NDIT) BYR-99-232) includes storage of scaffold materials (tubing and clamps) inside the Unit 2 containment. These items will be stored between refueling outages inside a locked steel container permanently anchored to the containment elevation 377' floor slab such that they will have no potential impact on the operation of the plant during normal operating conditions as well as accident conditions.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The storing of scaffold materials in the Unit 2 containment will not increase the probability of any accident or transient or malfunction of equipment, and will not increase or affect off-site dose, since materials will be stored in a locked container which is permanently anchored to prevent any interaction with safety-related components. In addition, the stored scaffold materials do not interface with any plant systems. No potential of sump blockage or seismic interaction will occur. The additional potential for generation of combustible gas has been evaluated and has been determined to be within acceptable limits. Also, the effect on passive heat sinks in containment can cause an increase in peak clad temperatures. This increase was evaluated and is considered bounded by current analyses for storage of these items.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The storing of scaffold materials on elevation 377' will not create an accident or malfunction of a different type than previously evaluated since the requirements provided by NDIT BYR-99-232 provide the necessary controls to prevent introduction of materials that can adversely affect the containment environment. These materials will be located in an area that does not contain safety-related equipment and does not change the design function of any systems or components.

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

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-99-0202
Activity No. NDIT BYR-99-232

The reduction in free containment volume has already been credited in the flooding analysis. Also, the effect of the increase in passive heat sinks is bounded by the current analysis.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0051
Activity No. PCCIR 6-97-049

DESCRIPTION:

The proposed activity, Plant Computer Change/Installation Request (PCCIR) 6-97-049, revises the alarm setpoint for containment building fuel handling accident area radiation monitor 1RT-AR012 due to changing background radiation levels. The setpoint change is being made to ensure the monitor provides the required isolation function at 10 mr/hr above background which is the criteria set in Technical Specification Table 3.3.6-1, note (b).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The proposed activity revises the alarm setpoint for containment building fuel handling accident area radiation monitor 1RT-AR012 due to changing background radiation levels. Adjusting the setpoint at which this monitor initiates an actuation ensures the isolation of the containment purge pathway at the desired actuation setpoint. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed activity revises the alarm setpoint for containment building fuel handling accident area radiation monitor 1RT-AR012 due to changing background radiation levels. Adjusting the setpoint at which this monitor initiates an actuation ensures the isolation of the containment purge pathway at the desired actuation setpoint. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The monitor is still set to actuate at 10 mr/hr above background which is the criteria set in Technical Specification Table 3.3.6-1, note (b). Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0052
Activity No. PCCIR 6-98-042

DESCRIPTION:

The proposed activity, Plant Computer Change/Installation Request (PCCIR) 6-98-042, revises the alarm setpoint for containment building fuel handling accident area radiation monitors 2RT-AR011 and 2RT-AR012 due to changing background radiation levels. The setpoint change is being made to ensure the monitors provide the required isolation function at 10 mr/hr above background which is the criteria set in Technical Specification Table 3.3.6-1, note (b).

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The proposed activity revises the alarm setpoint for containment building fuel handling accident area radiation monitors 2RT-AR011 and 2RT-AR012 due to changing background radiation levels. Adjusting the setpoint at which these monitors initiate an actuation ensures the isolation of the containment purge pathway at the desired actuation setpoint. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed activity revises the alarm setpoint for containment building fuel handling accident area radiation monitors 2RT-AR011 and 2RT-AR012 due to changing background radiation levels. Adjusting the setpoint at which these monitors initiate an actuation ensures the isolation of the containment purge pathway at the desired actuation setpoint. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The monitors are still set to actuate at 10 mr/hr above background which is the criteria set in Technical Specification Table 3.3.6-1, note (b). Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-99-0061
Activity No. Abnormal Position Log 99-01-01 and 99-02-02

DESCRIPTION:

This activity reviews abnormal positions for valves 1MS 202, 1MS203, and 1MS204 (Abnormal Position Log 99-01-01) and 2MS204 (Abnormal Position Log 99-02-02). These valves are Main Steam low point drain isolation valves. These valves are normally closed and the abnormal position being evaluated is throttled (1MS203, 1MS204, and 2MS204) and open (1MS202). The abnormal positions are necessary to accomplish the draining of moisture from the main steam lines to prevent potential water hammer event.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The piping downstream of the drain valves is designed to the same pressure and temperature requirements as the upstream piping. Pipe stress and loads have been reviewed and do not exceed design allowables. Failure of the piping is bounded by a failure of the main steam line and could not lead to a more severe accident. Therefore, the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

Failure of the piping is bounded by a failure of the main steam line and could not lead to a more severe accident. Therefore, the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

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

The piping downstream of the drain valves is designed to the same pressure and temperature requirements as the upstream piping and pipe stress and loads have been reviewed and do not exceed design allowables. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-00-0082
Activity No. Contingency Work Requests

WR990070874 ESF Battery 111
WR990070876 ESF Battery 112
WR990070877 ESF Battery 211
WR990070830 ESF Battery 212

DESCRIPTION:

The contingency work requests, if utilized, electrically exclude a single inoperable cell within a declared inoperable ESF battery, and will control the maintenance progression for this activity. The work requests provide instructions for installing load cable jumpers around the electrically disconnected inoperable cell to configure a battery comprised of 57 operable connected cells. Electrically isolating the inoperable cell and installing the load cable jumpers has an effect of reducing the inoperable ESF battery from a total 58 cell-member battery to a total 57 cell-member battery. Generally, reconfiguring a battery by electrically reducing the original battery by one cell is titled a 'n-1' battery. Following the establishment of the n-1 configuration, restoration to an operable status for the affected ESF n-1 battery may be achieved through subsequent evaluation and possible compensatory actions to ensure the n-1 ESF battery continues to meet its safety function.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

Loss of a 125 volt DC ESF battery is not an initiator of plant transients. Performance of the maintenance evolution by trained individuals, using written instructions with appropriate cautions, ensures adequate awareness and controls are in place to prevent inadvertent shorting. The affected battery has already been declared inoperable due to a degradation process involving a single cell prior to the performance of this activity. The performance of this maintenance activity specifically does not change this plant status, but may result in improved functionality, availability, or even operability of the 57-cell battery. The probability of the occurrence of any accident or transient stemming from this proposed activity is unchanged.

During the maintenance activity of configuring the previously described n-1 ESF battery, the affected battery will be considered inoperable. The affected ESF battery charger has sufficient capacity to maintain its DC loads as well as maintaining charge for the n-1 ESF battery. The load cable jumpers will meet original design requirements for ampacity, resistance, and seismic qualification. The failed cell cannot be removed physically without a seismic evaluation considering the overall seismic effect on the battery. The probability of failure of

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-00-0082
Activity No. Contingency Work Requests

WR990070874 ESF Battery 111
WR990070876 ESF Battery 112
WR990070877 ESF Battery 211
WR990070830 ESF Battery 212

the remaining cells is unchanged. The failed cell will not become a significant source of hydrogen or combustible gasses since it will be disconnected from its charging source. Spark prevention electrical-charge stabilization jumpers (typically a small gauge wire with a resistor and switch) are used to support evolutions with cell-to-cell connections. These attributes preclude potential malfunctions as a result of this activity.

Prior to the establishment of the n-1 ESF battery configuration, the affected battery has already been declared inoperable due to a cell failure mechanism. As such, the consequences of any accident or transient remain unchanged from this activity from the standpoint of which it is performed.

During the establishment of the n-1 ESF battery, this battery will remain inoperable due to a single cell failure not related to the execution of the proposed activity. Should the newly configured n-1 battery be unable to fulfill the role of operability, then the consequences of a malfunction of equipment important to safety are not increased beyond that level already reviewed and approved. Since the battery [57 (if analyzed) or 58 cells] will be capable of performing its safety function, the proposed activity will not increase the consequences of a malfunction.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

During the performance of the applicable contingency work request to electrically isolate a single faulted cell and establish an n-1 ESF battery, the battery will be inoperable. If the Technical Specification Actions cannot be completed within their specified timeframe, actions will be taken to place the plant in a condition where the affected battery is not required. Accidents during this timeframe are bounded by UFSAR analysis. After the faulted/degraded cell is electrically isolated through the removal of its intercell connectors, n-1 ESF battery continuity is restored through the use of load cable jumpers. These jumpers function equivalently to intercell connectors. The faulted/degraded cell will remain in place to preserve battery seismic integrity. In a functional n-1 configuration, a subsequent evaluation may determine that the n-1 configuration reflects an operable condition. This activity will not create the possibility of an accident or transient of a different type than previously evaluated.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-00-0082
Activity No. Contingency Work Requests

WR990070874 ESF Battery 111
WR990070876 ESF Battery 112
WR990070877 ESF Battery 211
WR990070830 ESF Battery 212

The load cable jumpers used to electrically exclude the failed cell and provide continuity of the n-1 battery will meet the original design requirements of ampacity, resistance, and seismic qualification. The failed cell cannot be removed without a seismic evaluation considering the impact of the entire battery. The electrically disconnected cell will not be connected to a power source so hydrogen production will not exceed analyzed values. As such, this activity does not create the possibility of a different type of malfunction of equipment important to safety than previously evaluated.

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

The construction of the n-1 battery electrically eliminates a single failed/degraded cell and restores the battery with 57 operable connected cells. As such, the n-1 battery may be subsequently determined to still meet its design loading requirements with possible additional and more limiting compensatory actions, and transition the entire n-1 battery to operable status with ability to fulfill operability requirements.

From the perspective of the proposed activity itself, the margin of safety as described in the basis for the Technical Specifications is unchanged since the operable status of the battery is unchanged. Prior to the construction of the n-1 battery, the battery is in an inoperable state due to a failure mode without relationship to the proposed activity. The proposed activity will improve the function of the battery, but in of itself will not change the status of inoperable. The Technical Specification Actions or progression of Actions is unchanged such that the incremental evaluated margin of safeties as mandated by the Technical Specifications is unchanged.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-00-0194

Activity No. Byron Unit 1 and Unit 2 Core Operating Limits Report Revision 3

DESCRIPTION:

The proposed change revises Core Operating Limits Report (COLR) Section 2.12.2 to add "TLCO 3.1.g" to the parenthetical reference denoting applicability of the COLR section to the Technical Requirements Manual (TRM) Limiting Condition for Operation (TLCO). Currently, only TLCO 3.1.k is listed. This change provides the connection between the COLR and TRM Section 3.1.g, which is being modified to allow obtaining sufficient boron concentration as an alternate required action when controls rods are withdrawn with DRPI inoperable in Modes 3, 4, and 5. This alternate action may be preferable to opening reactor trip breakers or driving in the control rods. The COLR revisions are being made in response to changes to the TRM Sections 3.1.g to allow an RCS minimum boron concentration as a comparable Required Action if TLCO 3.1.g, "Position Indication System - Shutdown," is not met.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The Position Indication System requirements in Modes 3, 4, and 5 do not meet the criteria for inclusion specified in 10 CFR 50.36, "Technical Specifications". In Mode 3, 4, and 5, failure to provide proper rod position indication has the potential to affect the mode required reactivity margin-to-critical conditions, but this effect can be compensated for by an increase in the boron concentration of the RCS or an insertion of control rods. The boron concentration specified in the COLR has been conservatively calculated and ensures that the SDM requirements of Technical Specification LCO 3.1.1 continue to be met.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The proposed change does not involve a physical alteration to the plant. No new equipment is being introduced and no installed equipment is being operated in a new or different manner. Safe plant operation will not be affected by this change since the restoration time is appropriate and the proposed alternate Actions comparable.

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

The boron concentration limits specified in the COLR have been conservatively calculated and ensure that the SDM requirements of Technical Specification LCO

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6H-00-0194

Activity No. Byron Unit 1 and Unit 2 Core Operating Limits Report Revision 3

3.1.1 continue to be met. Therefore, the margin of safety, as defined in the basis for any Technical Specification, is not reduced.

PEPP-E FORM

Safety Evaluation Summary Form

Tracking No. 6G-01-0013
Activity No. Byron 2 Cycle 10 Reload Design

DESCRIPTION:

The proposed activity evaluates the Byron Unit 2 Cycle 10 (BY2C10) core reload design. The changes evaluated encompasses the composite effects of the following changes:

1. Fuel loading pattern.
2. Revision to the Core Operating Limits Report (COLR)
3. Revision to the Byron Unit 2 curvebook
4. Revision to Technical Requirements Manual (TRM) Section 3.1.e.6 and associated procedures to ensure adequate boric acid inventory in the boric acid tank for bringing Unit 2 to cold shutdown conditions
5. Fuel mechanical design changes:
 - a. Use of cast top nozzle
 - b. Use of bead blasted Inconel 718 top nozzle spring screws
 - c. Implementation of ½" axial blanket pellets
 - d. Implementation of LTAs from Byron 1 Cycle 10 including the high burnup fuel rods
 - e. Lengthen axial blankets from 6" to 8"
6. RCAA park position of 225 steps
7. Use of 12 WABAs for a second cycle

The changes were incorporated into many implementing procedures, including the Byron Curve Book, the Reload Design Key Parameter Checklist, and COLR.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The fuel construction meets all design criteria. The core fuel loading pattern and changes in operating characteristics do not produce any mechanisms by which any of the evaluated accidents can be initiated. The consequences of previously evaluated accidents are not increased because the reload design process confirmed all design parameters satisfy the accident analysis limits and assumptions as documented in the UFSAR or other appropriate evaluations. The analyses included mechanical, nuclear, thermal-hydraulic and transient analyses, which concluded that all core parameter criteria, such as departure from nucleate boiling, peak clad temperature, and fuel temperature, were met. In addition, the analyses showed that all system performance criteria, such as containment pressure and no water through pressurizer safeties were met.

Safety Evaluation Summary Form

Tracking No. 6G-01-0013
Activity No. Byron 2 Cycle 10 Reload Design

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

This core reload fuel mechanical features introduce no new failure modes. The reload key parameters and assumptions meet all standards and criteria. The core operates within pertinent design basis operating limits. Therefore, the cycle specific changes in these parameters introduce no new failure modes.

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

Each of the applicable Technical Specification and TRM were reviewed to determine the impact of the Byron 2 Cycle 10 reload core on the acceptance limits/margins or safety. Operation of Byron 2 Cycle 10 has been analyzed in accordance with approved methodologies. The reload core has been designed to operate within safety analysis acceptance limits and will therefore maintain safety margins. Based on the above, no reduction in the margin of safety will occur from the Byron 2 Cycle 10 core reload.

Safety Evaluation Summary Form

Tracking No. 6G-01-0020 Revision 1
Activity No. High Burnup LTA Program

DESCRIPTION:

Four (4) rods from Lead Test Assembly (LTA) assembly M09E will be removed from the assembly and be replaced by rods from assembly L41E for the purpose of obtaining representative data at extended fuel burnup (>60,000 MWD/MTU). Rod B1 of M09E will be replaced by Rod M5 of L41E. Rod 15 of M09E will be replaced by Rod E4 of L41E. Rod G1 of M09E will be replaced by G4 of L41E. Rod N1 of M09E will be replaced by D5 of L41E. The top nozzle for M09E was replaced with a new removable top nozzle. The LTA will be identical in shape and appearance to the current fuel assembly design.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The fuel construction meets all design criteria. The core fuel loading pattern and changes in operating characteristics do not produce any mechanisms by which any of the evaluated accidents can be initiated. The consequences of previously evaluated accidents are not increased because the reload design process confirmed all design parameters satisfy the accident analysis limits and assumptions as documented in the UFSAR or other appropriate evaluations.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

As required by the Westinghouse Fuel Criteria Evaluation Process (FCEP), the LTA will satisfy the five (5) guidelines accepted by the NRC. These are:

- Design of LTAs are mechanically and hydraulically compatible with existing fuel
- Peaking factors meet the Technical Specifications limits
- NRC approved/accepted safety/design methods and codes are used
- No Specified Acceptable Fuel Design Limits (SAFDL) are exceeded
- Not more than eight (8) LTAs per core are inserted.

Furthermore, Technical Specification 4.2.1 allows the use of a limited number of LTAs in nonlimiting core regions.

These LTAs will comply with the FCEP and Technical Specifications. All safety evaluations in support of using this LTA will be performed in accordance with accepted methodologies.

Safety Evaluation Summary Form

Tracking No. 6G-01-0020 Revision 1
Activity No. High Burnup LTA Program

By complying with the above, the demonstrated adherence to these standards and criteria precludes new risks to components and systems that could introduce a new type of accident. Therefore, the possibility of an accident or transient of a different type than any previously evaluated has not been created by the proposed change to the LTA and the UFSAR.

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

Each of the Technical Specifications and Technical Requirements Manual (TRM) sections were reviewed to determine the impact of the LTA with high burnup rods on the acceptance limits/margin of safety.

This evaluation is valid for the high burnup LTA up to a burnup of 60,000 MWD/MTU (rod average). Although there are no Technical Specifications that impose a limit on fuel rod burnup, Byron has a licensing basis commitment that limits the fuel rod-average burnup to $\leq 60,000$ MWD/MTU. This licensing basis commitment is documented in the NRC Safety Evaluation supporting Amendment 78 dated December 19, 1995. This amendment approved the use of ZIRLO fuel cladding. Since the four high burnup fuel rods will exceed this licensing basis limit, NRC approval will be requested (by February 15, 2002) to exceed 60,000 MWD/MTU burnup for high burnup LTAs. The acceptability of using the four high burnup rods in an LTA is evaluated in the Byron Station, Unit 2 Cycle 10 Reload Safety Evaluation which is supported by Westinghouse Topical Report, "Extended Burnup Operation Assessment for the VANTAGE+ Design in Byron Unit 2 Cycle 10," dated March 2001.

Safety Limit 2.1.1.3 specifies for Modes 1 and 2 that the peak fuel centerline temperature shall be maintained $\leq 4700^{\circ}\text{F}$. From the Technical Specification Safety Limit Bases, overheating of the fuel is prevented by maintaining the steady state peak Linear Heat Rate below the level at which fuel centerline melting occurs. Fuel centerline melting occurs when the local Linear Heat Rate, or power peaking, in a region of fuel is high enough to cause the fuel centerline temperature to reach the fuel melting point. This Safety Limit was incorporated in Technical Specification Amendment 113 (Expanded Core Operating Limits Report (COLR) Format) where the Reactor Core Safety Limits Figure was moved to the COLR. The NRC Safety Evaluation Report (SER) for that amendment stated:

"...the peak fuel centerline temperature shall be maintained less than or equal to 4700 degrees Fahrenheit. Therefore, the figure would be replaced with more specific requirements regarding the safety limits (i.e., the fuel DNB design basis and the fuel centerline melt design basis), conforming with WCAP-14483-A."

Safety Evaluation Summary Form

Tracking No. 6G-01-0020 Revision 1
Activity No. High Burnup LTA Program

WCAP-14483-A states that the fuel centerline temperature limit has been established based on the melting temperature for UO_2 of 5080°F, decreasing by 58°F per 10,000 MWD/MTU of burnup. Based on this WCAP equation, a burnup of approximately 65,500 MWD/MTU could be accrued before the melting temperature would reach the 4700°F Safety Limit. Thus, fuel burned past this burnup would have a melting temperature less than the 4700°F Safety Limit.

Westinghouse has evaluated the fuel centerline temperatures for an uprated Byron core. This evaluation shows that the four high burnup rods would remain below both the 4700°F Safety Limit and the WCAP-14483-A equation for fuel melting temperatures for extended burnups past 75,000 MWD/MTU. Thus, fuel melting will not occur with the LTA high burnup rods.

Neither the Safety Limit nor the fuel centerline melt design basis in WCAP-14483-A will be exceeded; however, due to burning fuel past the theoretical 65,500 MWD/MTU burnup where the fuel melting point corresponds to the 4700°F Safety Limit, the Safety Limit would be non-conservative with respect to providing a limit that would preclude fuel melting with burnups higher than 65,500 MWD/MTU. To allow burnup past 65,500 MWD/MTU, the Safety Limit as currently stated in the Technical Specifications would need to be revised prior to exceeding 65,500 MWD/MTU. This burnup would occur at a cycle burnup of 20,700 MWD/MTU (approximately end of July 2002).

The insertion of the four high burnup rods does not impact any other Technical Specification or TRM section. The LTA has been designed to operate within the SAFDLs and will therefore have sufficient safety margins. Furthermore, the LTA will satisfy the five guidelines specified in the FCEP approved by the NRC. The LTA will comply with Technical Specification 4.2.1 by being placed in a nonlimiting core region.

Based on the above, the LTA with high burnup rods will not reduce the margin of safety with respect to the fuel centerline Safety Limit and the fuel melt design basis in WCAP-14483-A due as the Linear Heat Rate with the minimum margin to safety occurs at beginning of life. An evaluation demonstrates that margin of safety with respect to the Safety Limit remains fairly constant from burnups of 50,000 MWD/MTU out to 75,000 MWD/MTU. It has been demonstrated that fuel centerline melting margin remains with respect to the WCAP-14483-A fuel melt design basis, no fuel melting will occur, and all SAFDLs will be satisfied justifying the use of the LTA for representative testing purposes.

Safety Evaluation Summary Form

Tracking No. 6H-01-0026

Activity No. Byron Unit 1 Cycle 11 Core Operating Limits Report Revision 5

DESCRIPTION:

The proposed activity revises the Core Operating Limits Report (COLR) for Byron Unit 1 Cycle 11 to reflect the changes required to comply with the License Amendment Number 116 for implementing the BEACON Core Monitoring system which was approved by the NRC on February 13, 2001.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The cycle design does not involve an increase in the probability of occurrence of an accident or an increase in the consequences of an accident previously evaluated in the safety analysis report. The Byron Unit 1 Cycle 11 core has been verified in accordance with approved methods to satisfy the accident analysis limits and assumptions presented in the UFSAR. Additionally, the changes outlined in the COLR to support the BEACON Technical Specification changes have been reviewed and approved by the NRC.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The Byron 1 Cycle 11 core, including consideration of the effects of the proposed changes, will continue to meet safety parameter limits. All design and performance criteria will continue to be met and no new failure modes or limiting single failure mechanisms have been created. The core will not operate in excess of pertinent design basis operating limits for the safety parameters. The demonstrated adherence to these standards and criteria precludes new risks to components and systems that could introduce a new type of accident. Additionally, the changes outlined in the COLR to support the BEACON Technical Specification changes have been reviewed and approved by the NRC. Therefore, the possibility of an accident or transient of a different type than any previously evaluated has not been created by the proposed changes.

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

Technical Specifications and Technical Requirements Manual sections were reviewed to determine the impact of the Byron 1 Cycle 11 core on the acceptance limits and margin of safety. Operation of the Byron 1 Cycle 11, with the implementation of BEACON, has been analyzed in accordance with NRC

Safety Evaluation Summary Form

Tracking No. 6H-01-0026

Activity No. Byron Unit 1 Cycle 11 Core Operating Limits Report Revision 5

approved methodologies. The core has been designed to operate within safety analysis acceptance limits and will therefore maintain safety margins. Additionally, the changes outlined in the COLR to support the BEACON Technical Specification changes have been reviewed and approved by the NRC. Based on the above, no reduction in the margin of safety will occur from the Byron 1 Cycle 11 core.

Safety Evaluation Summary Form

Tracking No. 6H-01-0027
Activity No. Byron 2 Cycle 9 Core Operating Limits Report Revision 5

DESCRIPTION:

The proposed activity revises the Core Operating Limits Report (COLR) for Byron Unit 2 Cycle 9 to reflect the changes required to comply with the License Amendment Number 116 for implementing the BEACON Core Monitoring system which was approved by the NRC on February 13, 2001.

SAFETY EVALUATION SUMMARY:

1. The probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased because:

The cycle design does not involve an increase in the probability of occurrence of an accident or an increase in the consequences of an accident previously evaluated in the safety analysis report. The Byron Unit 2 Cycle 9 core has been verified in accordance with approved methods to satisfy the accident analysis limits and assumptions presented in the UFSAR. Additionally, the changes outlined in the COLR to support the BEACON Technical Specification changes have been reviewed and approved by the NRC.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because:

The Byron 2 Cycle 9 core, including consideration of the effects of the proposed changes, will continue to meet safety parameter limits. All design and performance criteria will continue to be met and no new failure modes or limiting single failure mechanisms have been created. The core will not operate in excess of pertinent design basis operating limits for the safety parameters. The demonstrated adherence to these standards and criteria precludes new risks to components and systems that could introduce a new type of accident. Additionally, the changes outlined in the COLR to support the BEACON Technical Specification changes have been reviewed and approved by the NRC. Therefore, the possibility of an accident or transient of a different type than any previously evaluated has not been created by the proposed changes.

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

Technical Specifications and Technical Requirements Manual sections were reviewed to determine the impact of the Byron 2 Cycle 9 core on the acceptance limits and margin of safety. Operation of the Byron 2 Cycle 9, with the implementation of BEACON, has been analyzed in accordance with NRC

Safety Evaluation Summary Form

Tracking No. 6H-01-0027

Activity No. Byron 2 Cycle 9 Core Operating Limits Report Revision 5

approved methodologies. The core has been designed to operate within safety analysis acceptance limits and will therefore maintain safety margins. Additionally, the changes outlined in the COLR to support the BEACON Technical Specification changes have been reviewed and approved by the NRC. Based on the above, no reduction in the margin of safety will occur from the Byron 2 Cycle 9 core.

50.59 REVIEW COVERSHEET FORM

LS-AA-104-1001
01/11/01

Location: Byron Units 1 and 2

Page 1 of 1

Activity/Document Number: DIT BYR-2000-012

Revision Number: 0

Title: Pre-Load of Outage Materials Inside Unit 2 Containment - B2R09

Description of Activity:

The proposed activity permits staging of miscellaneous outage tools and equipment (not including scaffolding and lead shielding) inside containment prior to refueling outage B2R09. This activity is controlled under the requirements contained in DIT BYR-2000-012.

Reason for Activity:

The proposed activity will free up the containment entry points (equipment and emergency hatches) during the beginning of the refueling outage by reducing the quantity of outage materials brought through these access points at Mode 5. This will allow an early start to activities that normally require a delay due to transport of these items into containment. This results in timesaving at the start of the outage with the intent of shortening the overall outage duration.

Effect of Activity:

These items will be staged such that they have no potential to impact on the operation of the plant during normal operating conditions as well as accident conditions. This activity affects floor loading on the internal containment structure as well as containment passive heat sinks. Additional potential effects are eliminated by controls contained in NDIR BYR2001-012.

Summary of Conclusion for the Activities 50.59 Review:

The storage of scaffolding materials inside the containment building does not have any impact on the results of the design basis evaluations discussed in the UFSAR. Additionally, the operation of plant equipment required to mitigate the consequences of design basis events is not degraded. Therefore, the consequences of evaluated accidents or transients are not increased.

Attachments:

- Attach completed Applicability Review if 50.59 Screening is not required.
- Attach completed 50.59 Screening if 50.59 Evaluation is not required.
- Attach completed 50.59 Evaluation if required to be performed.
- Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review		
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	Rev. _____
<input type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	Rev. _____
<input checked="" type="checkbox"/>	50.59 Validation	50.59 Validation No.	Rev. <u>0</u>

50.59 REVIEW COVERSHEET FORM

LS-AA-104-1001
01/11/01

Location: Byron

Page 1 of 1

Activity/Document Number: Byron 1 Cycle 11A and Byron 2 Cycle 10A Core Operating Limits Reports (COLRs) Revision

Revision Number: 0

Title: Byron 1 Cycle 11A and Byron 2 Cycle 10A Core Operating Limits Reports (COLRs) Revision

Description of Activity:

Revise the Byron 1 Cycle 11A and Byron 2 Cycle 10A Core Operating Limits Reports (COLRs) Revision 0 value for minimum pressurizer pressure from 2219 psig to 2209 psig. Procedures BOP RY-7, BOP RY-9, 1BOSR 4.9.2-1, 2BOSR 4.9.2-1, 1BVSr 1.3.2-1, and 2BVSr 1.3.2-1 require revision as a result of this change.

Reason for Activity:

The reason for the change is to update the Byron Unit 1 and 2 COLRs based upon the revised pressurizer pressure DNB limit value as determined by Nuclear Fuels Management in NFM ID 0000188, Revision 0.

Effect of Activity:

The effect of the proposed activity will change the existing COLR DNB limit for pressurizer pressure from 2219 psig to 2209 psig. This is reflected in COLR Section 2.12.1. Revising this value in the COLRs will lower the pressurizer pressure limit for entry into Technical Specification Limiting Condition for Operation 3.4.1 for DNB Parameters. There is no effect on plant operation as a result of this change.

Summary of Conclusion for the Activities 50.59 Review:

The proposed activity can be implemented with prior NRC review and approval. There is no effect on plant operations as a result of this change. The initial conditions used in analyses have not changed so there is no increase in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety. The proposed activity does not change any equipment, setpoints, or plant operating parameters. Therefore, the possibility of a different type of malfunction of equipment important to safety has not been created. No changes are required to systems, structures, or components as a result of the revised COLRs.

Attachments:

- Attach completed Applicability Review if 50.59 Screening is not required.
- Attach completed 50.59 Screening if 50.59 Evaluation is not required.
- Attach completed 50.59 Evaluation if required to be performed.
- Attach completed 50.59 Screening and 50.59 Evaluation if multiple discrete elements of an activity have been linked together and certain elements required a 50.59 Evaluation while other elements did not.

Forms Attached: (Check all that apply.)

<input type="checkbox"/>	Applicability Review		
<input type="checkbox"/>	50.59 Screening	50.59 Screening No.	Rev. _____
<input type="checkbox"/>	50.59 Evaluation	50.59 Evaluation No.	Rev. _____
<input checked="" type="checkbox"/>	50.59 Validation	50.59 Validation No.	Rev. <u>0</u>