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A PECO Energy/British Energy Company

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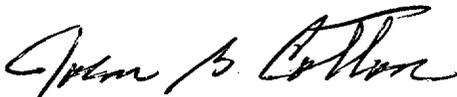
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Dear Sir or Madam:

Subject: THREE MILE ISLAND NUCLEAR STATION, UNIT I (TMI-1)
OPERATING LICENSE NO. DPR-50
DOCKET NO. 50-289
10 CFR 50.59 REPORT FOR 1998 AND 1999

In accordance with the requirements of 10 CFR 50.59, enclosed is the TMI-1 10 CFR 50.59 Report for the period from January 1998 through December 1999. It contains brief descriptions of program and procedure changes, tests, experiments, permanent and temporary modifications, and includes a summary of the findings of the respective safety evaluations for each item identified.

Very truly yours,



John B. Cotton
Vice President, TMI

JBC/vlk

Attachment

cc: Administrator, Region I – Hubert J. Miller
TMI-1 Senior Project Manager – Timothy G. Colburn
TMI Senior Resident Inspector – Wayne L. Schmidt
File 00039

IE47

I. Experiments and Tests

A Safety Evaluation was performed for each of the experiments and tests conducted at TMI-1 as identified below. The results of those evaluations found, based on the description of the activity, that the probability of occurrence or consequences of an accident or malfunction either previously analyzed or of a new or different type was not increased. The experiments or tests reduced no Technical Specification margin of safety. No Unreviewed Safety Question resulted from the experiments or tests.

Experiment/Test: Quantification of Main Vacuum Pump Seal Leakage (VA-P-1A/B/C) (STP 1-98-0041)

Description of Experiment/Test: This test was performed to determine the amount of inboard seal leakage occurring at VA-P-1A, 1B, and 1C. This helped quantify the amount of condenser in-leakage. Also this procedure was performed to vary secondary nitrogen injection rate while monitoring dissolved oxygen, off-gas flow, and vacuum pump flow to quantify these relationships.

Safety Evaluation Summary: The Main Condenser vacuum was kept well below the alarm values so that no Technical Specification related events, such as a trip based on loss of feedwater, could occur. The safety evaluation concluded that the STP did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Experiment/Test: AH-E1 A/B/C Water Sample

Description of Experiment/Test: The purpose of this STP was to take a water sample from the AH-E1s.

Safety Evaluation Summary: This test merely replaced the water on the waterside of the emergency cooling coils to ensure that the suggestions of GL 89-13 were met. Replacing the water did not meet the threshold of 10 CFR 50.59 requirements. The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Experiment/Test: NI-5, NI-6, and NI-8 ECAD Tests (STP 1-98-0013)

Description of Experiment/Test: The purpose of this test was to collect ECAD data for NI 5,6,and 8 for analysis by GPUN, ECAD Division of CM Technologies and IST Corporation. ECAD data was also obtained for NI-7 as an option, time permitting.

Safety Evaluation Summary: During this test a channel was placed in manual bypass. This bypass is provided for by design and allowed by the Technical Specifications. Therefore, the safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the margin of safety; did not create the possibility of an accident or malfunction of equipment important

to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Experiment/Test: DH-C-1B Performance Test (STP 1-99-0044)

Description of Experiment/Test: This test determined if DH-C-1B heat transfer capability meets or exceeds the design values. The test provided the basis to confirm the operability of DH-C-1B. If the heat removal capability of the B DHR string was equivalent or greater than the heat removal capability of the A DHR string, then DH-C-1B was operable. The conclusion was based on heat transfer testing of DH-C-1A in each of the last three outages.

Safety Evaluation Summary: An evaluation showed that the test did not affect the dose consequence of any accident evaluated in the SAR. The abnormal configuration used for this test (simultaneous operation of both trains of the DHR) is consistent with the plant design as described in the FSAR Section 9.5. Also the test was performed with the plant in cold shutdown conditions. The Technical Specification requirements for LTOP & RCS pressure boundary integrity were satisfied. All equipment was operated within its design parameters. A Technical Specification change was not required.

Experiment/Test: Controlled Gas Introduction into the Main Condenser (STP 1-99-0009)

Description of Experiment/Test: This test injected air, nitrogen, SF-6, and helium into various points that communicate with the Main Condenser. The response of condensate dissolved oxygen to the injections provided data to further the search for the source of dissolved oxygen.

Safety Evaluation Summary: An evaluation showed that the net increase in off-gas rate would be less than 10 SCFM and no protective system setpoints would be changed or operating procedures altered. Normal operating limits were maintained so that the probability of occurrence of an accident previously evaluated in the Safety Analysis Report was not increased.

Experiment/Test: Sequential Isolation of VA-V-QA/B (STP 1-99-0026)

Description of Experiment/Test: This test isolated two flow paths of non-condensables from the main condenser to the air removal system. The isolation was maintained for 30 to 45 minutes to minimize the effect on main condenser vacuum.

Safety Evaluation Summary: An evaluation showed that this test did not change any protective system setpoints or alter any operating procedure. Therefore, there was no adverse affect on nuclear safety or safe plant operation. The probability of occurrence of an accident previously evaluated in the safety analysis report was not increased. The probability of malfunction of the Main Condenser was not increased by the test and the margin of safety as defined by the Technical Specifications was not reduced.

Experiment/Test: Continuous Gas Partitioner Testing at TMI (STP 1-99-0052)

Description of Experiment/Test: This test connected tubing to various points around the Main Condenser to allow for the controlled injection of helium. The test limited injection of gas into the condenser to less than 10 SCFM, which is within the offgas capability of the vacuum pumps. Only helium was injected so that the dissolved oxygen concentration would not increase.

Safety Evaluation Summary: An evaluation showed that this test did not change any protective system setpoints or alter any operating procedure. Therefore, there was no adverse affect on nuclear safety or safe plant operation. The probability of occurrence of an accident previously evaluated in the safety analysis report was not increased. The probability of malfunction of the Main Condenser was not increased by the test and the margin of safety as defined by the Technical Specifications was not reduced.

II. Document and Procedure Changes

A Safety Evaluation was performed for each of the document and procedure changes made at TMI-1 as identified below. The results of those evaluations found, based on the description of the change, that the probability of occurrence or consequences of an accident or malfunction either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the individual document and procedure changes. No Unreviewed Safety Question resulted from the document and procedure changes.

Document: QCL Checklist (SE-000151-001)

Description of Change: This change downgraded the QCL for Turbine Building (TTM-BLG-0002) from Z21 to Z30 to correctly classify the building and make classification consistent with System 151 (Turbine Building) which is currently classified Z30.

Safety Evaluation Summary: A safety evaluation concluded that the Turbine Building contains no Nuclear Safety Related components. Therefore, changing the classification from "RR" to "Other" had no impact on nuclear safety or safe operation. The Turbine Building is not required to be operable by the FSAR or Technical Specifications; therefore revisions to the system/components descriptions in these documents are not required.

Document: Primary Shield Wall Penetration Temperature (SE-000153-005)

Description of Change: This document was a technical evaluation to address the long-term affect of local elevated temperatures in primary shield wall penetrations and to clarify that FSAR requirements related to concrete temperatures were satisfied even with recorded temperatures up to 300° F.

Safety Evaluation Summary: A safety evaluation concluded that the elevated temperatures in penetrations A - hot leg and B2 – cold leg would not change the structural capacity of the primary shield wall/penetrations for natural phenomena of consequences of an accident due to natural phenomena and normal operating loads. By the foregoing evaluation, it is demonstrated that the condition does not adversely affect nuclear safety of the environment and no unreviewed safety questions exist.

Document: FSAR Update Review of Appendices 5A, 5B, 5D, & 5E (SE-000153-010), (PFU-98-T1-064)

Description of Change: This was a review of the aforementioned FSAR sections as a part of the FSAR update.

Safety Evaluation Summary: An evaluation concluded that this document updating activity did not create an unreviewed safety question or require a Technical Specifications change because it only requires editorial changes or updating of the FSAR and the deleted figure numbers with cross-reference drawings in the FSAR and no tests or experiments were required in this document.

Document: FSAR Update (PFU 98-T1-158, PFU 98-T1-159) (SE-000202-002)

Description of Change: This change revised Sections 1 and 3 of the FSAR. The changes in Section 1 were made to update his section with information that had been changed in other FSAR sections and had been previously reviewed for safety. The changes were mostly descriptive in nature and were essentially editorial. The changes in Section 3 were editorial to clarify or correct the text, specify initial core information more completely, correct referencing errors and add Reference 115 that was incorrectly omitted previously.

Safety Evaluation Summary: An evaluation concluded that this FSAR change had no affect on the accident analysis or assumptions or conclusions and that the change did not affect the probability of occurrence or the consequences of an accident or malfunction previously evaluated in the SAR. No accidents of a different type were introduced by this change. This change did not conflict with the Technical Specifications. This change did not have the potential to adversely affect nuclear safety or safe plant operations.

Document: FSAR Changes for 2772 MW Load (SE-000210-001)

Description of Change: This change revised Chapters 6 and 14 of the FSAR

Safety Evaluation Summary: An evaluation concluded that it was acceptable to change the FSAR Chapters 6 and 14 as delineated in the change document because the containment minimum back pressure analysis is conservative. Results of recent LOCA analyses performed at 2772 MWt demonstrated that the PCTs would be less than 2200° F, the maximum amount of core wide oxidation would not exceed 1 percent of the fuel cladding, and the maximum calculated local cladding oxidation would be less than 17%. Additionally, the cladding would remain amenable to cooling and long-term cooling can be established and maintained after the LOCA.

Document: FSAR Change Request (SE-000210-002)

Description of Change: This change revised Table 7.1-2, Corrected reference in Section 7.1.3.2.b to Table 7.1-2, deleted a statement concerning diesel generator loading and referenced Section 8.2.3, and made several editorial corrections.

Safety Evaluation Summary: An evaluation concluded that this FSAR change had no affect on the accident analysis or assumptions or conclusions and that the change did not affect the probability of occurrence or the consequences of an accident or malfunction previously evaluated in the SAR. No accidents of a different type were introduced by this change. This change did not conflict with the Technical Specifications. This change did not have the potential to adversely affect nuclear safety or safe plant operations.

Document: FSAR Change Request (SE-000211-020)

Description of Change: This change deletes statements in Section 7.3.2.2.c.5 that describe HPI cross connects, cavitating venturis and high capacity makeup valve MU-V-217. The deleted information is being added to Sections 6.1.3.1 and 9.1.2.1 as necessary to maintain the same design basis description as before these changes. The changes are intended to improve the clarity of the section by removing statements irrelevant to this section.

Safety Evaluation Summary: A safety evaluation concluded that this change had no impact on plant operation or plant nuclear safety. The statements removed from this section have been relocated to more appropriate sections of the FSAR. There is no change to the operation or physical configuration of the makeup system as a result of this FSAR change. This change has no affect on the accident analysis assumptions or conclusions. This change does not affect the probability of occurrence or the consequences of an accident or malfunction previously evaluated in the SAAR. No accidents of a different type are introduced by this change. This change does not conflict with the Technical Specifications. This change does not reduce the margin of safety of any Technical Specification. This change does not have the potential to adversely affect nuclear safety or safe plant operations.

Document: FSAR Change Request (SE-000211-021)

Description of Change: This change corrected the design pressures and temperatures for several components that were misstated. Wherever possible the parameter was verified using the nameplate on the component.

Safety Evaluation Summary: An evaluation concluded that the probability of occurrence for an accident or the consequence of an accident or malfunction of equipment important to safety previously evaluated in the SAR has not been increased because the installed plant equipment is not effected by this change. The design parameters used to install the present equipment were misrepresented in the FSAR and now will be corrected to ensure that the design basis is not corrupted. The possibility for an accident or a malfunction of a different type than any previously evaluated in the SAR is not changed because there are no changes in plant equipment associated with this change. None of the parameters changed in this request are mentioned in Technical Specifications or in a Technical Specification basis statement.

Document: FSAR Change Request (SE-000211-022)

Description of Change: This change made corrections to Section 9.1.2.j and 9.1.2.1. It added the context of statements deleted from 7.3.3.3.c.5, identified that the seal injection filters are not identical, deletes a statement what attempts to describe which system operations can be controlled remotely, and makes editorial corrections.

Safety Evaluation Summary: An evaluation concluded that there is no change to the operation of physical configuration of the make up system as a result of this FSAR change. This change has no affect of the accident analysis assumptions or conclusions. This change does not affect the probability of occurrence or the consequences of an accident or malfunction previously evaluated in the SAR. No accidents of a different type are introduced by this change. This change does not conflict with the Technical Specifications. This change does not reduce the margin of safety for any Technical Specification. This change does not have the potential to adversely affect nuclear safety or safe plant operations.

Document: MV-104 Setpoint at 150 PSID (SE-000211-025) (MNCR CAP T1998-1079)

Description of Change: The setpoint for MU-V-104 was changed due to an error in the setpoint control program. This determination considers the interim effect of this change in accordance with CAP T1998-1079.

Safety Evaluation Summary: A safety determination concluded that the function of MU-V104 is to prevent damage or rupture of MU system components in the seal return line if the MU pump recirculation flow path to the MU tank were to be inadvertently isolated. With the setpoint at 150 psid versus 100 psid, in such an event the line pressure could approach 200 psig. The components in this section of the MU system were leak tested a greater than or equal to 150% of design pressure of 225 psig, per the design code. The seal return coolers were shop tested to 255 psig. The 150-psid setpoint on MU-V-104 would allow the pressure to exceed design but is bounded by original system and component leak testing. The system integrity will not be threatened by the higher relief valve setpoint. Therefore, nuclear safety or safe plant operation will not be adversely affected.

Document: MU-V-167 Heat Trace Removal (SE-000211-026) (EER 144028)

Description of Change: This was an evaluation of taking the heat trace off of MU-V-167, but not off of the adjacent piping.

Safety Evaluation Summary: An evaluation concluded that since MU-V-167 is the bypass valve around MU-V-9, the flow control valve for bleeding Reactor Coolant Bleed Tank water into the makeup tank. MU-V-167 is normally closed and not open during normal operations. It normally performs an isolation and passive integrity function. The function of feeding the RCS from the RCBT via the makeup tank is required during normal operations and is not required during any Design Basis Event or for Safe Shutdown. For these reasons the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR cannot be increased. Also the valve will not be adversely affected by this change in heat trace. On the contrary by preventing overheating of the valve and subsequent diaphragm failures, operation and reliability of the valve will be improved. Since the valve will perform as designed, there is no possibility for creating an accident or malfunction of a different type than any evaluated previously in the SAR. In addition, since the valve will continue to perform as designed the margin of safety as defined in the basis for any Technical Specification is not reduced.

Document: FSAR Change Request (SE-000212-033)

Description of Change: This change involved Section 9.5.2 and Tables 9.5-1 and 9.5-2. A statement was revised to identify that only one train of DHR is normally used for cooldown of RCS to refueling conditions. Temperatures and pressures associated with DHR were corrected. Several rewordings and corrections were made.

Safety Evaluation Summary: An evaluation concluded that there was no change to the operation or physical configuration of the decay heat system as a result of this FSAR change. The component design parameter changes represent correction of errors and not changes to equipment requirements nor to the installed equipment. This change had no affect of the accident analysis assumptions or conclusions.

Document: FSAR Change Request (SE-000212-034)

Description of Change: This change was editorial corrections concerning DH suction temperature and NPSH in Section 7.3.

Safety Evaluation Summary: An evaluation concluded that there is no change to the operation or physical configuration of the decay heat system or any containment isolation valve position indicators as a result of the FSAR change. These changes are editorial in nature. The intent of the FSAR description is unchanged. This change has no effect on the accident analysis assumptions or conclusions. This change does not affect the probability of occurrence or the consequences of an accident or malfunction previously evaluated in the SAR.

Document: FSAR 6.1 Revision (SE-000213-010)

Description of Change: This FSAR change replaced the description of how CF System performance was verified.

Safety Evaluation Summary: An evaluation concluded that calculation C-1101-213-E271-014 provides the analytic basis for the test acceptance criteria of the CF System and showed that the revision did not adversely affect nuclear safety or safe plant operations. Also the probability of occurrence or consequences of an accident or malfunction of equipment important to safety was not increased by replacing the discussion of how the CF performance was verified in the current test method.

Document: QCL for CF-V-3A/B (SE-00213-011)

Description of Change: This change lowered the quality classification of subcomponents - valve operator, motor, and fuse - of CF-V-3A/B from "Nuclear Safety Related" to "Regulatory Required" and "Other."

Safety Evaluation Summary: An evaluation concluded that any failure of CF-V-3A/B would not effect the probability of occurrence of an accident or malfunction of equipment important to safety. The assurance that CF-V-3A/B will remain closed and its effect on the consequence of an accident is unchanged by the component quality of the motor, valve operator, or fuse. With the breaker open, none of these devices can effect the valve position. The basis for Technical Specification 3.3.1.2 is not affected by the quality classification of the valve operator, motor, or fuse.

Document: FSAR Review (SE-000220-007)

Description of Change: This change eliminated out dated information and incorporates information from License Amendment 176, Technical Specification Change Request 207, BWOG responses to GL 92-01, and the NRC SER of Cv-USE bounding analysis.

Safety Evaluation Summary: SE-115302-048 provided justification for responses to the 10 CFR 50.59 questions.

Document: RC-V0002 Design Basis Review (EER 145141) (SE-000220-010)

Description of Change: This design basis review is an after-the-fact design basis comparison of the original and replacement valve, RC-V0002, which was replaced in November 1974. When replaced,

there was no indication that any formal design basis evaluation was performed, beyond knowing that the replacement and the original valve were both purchased for the exact same pressurizer PORV isolation function, but on separate reactor plants. The past 25 years of reliable service has tended to indicate that the substitution was valid, but a formal design basis determination needed to be documented.

Safety Evaluation Summary: An evaluation concluded that the substitution of a Velan gate valve for a Dresser gate valve, for RC-V0002, in 1974, involves no adverse affect on nuclear safety or safe plant operation. Evaluation to be equivalent or superior to the original valve in function and performance. The past 25 years of use have helped to verify, by experience, that the decision to use the valve was appropriate. It has not, and is not expected to adversely affect nuclear safety or safe plant operation. The substitution of a new valve of equivalent function and performance did not involve any unreviewed safety question.

Document: Three Mile Island Nuclear Generating Station, Unit 1 Reactor Vessel P/T Limits Revision, Technical Specification Change Request 270 (SE-000221-006)

Description of Change: Technical Specification Change Request 270 proposed to revise the RCS heatup, cooldown, and inservice leak and hydrostatic testing pressure limitations, contained in Technical Specification Section 3.1.2. These pressure limits were established to provide assurance of the reactor vessel integrity from potential non-ductile failure during normal plant operating modes. This change was requested in response to NRC letter - TAC M99319, dated October 8, 1997 – regarding closeout of NRC Generic Letter, GL 92-01

Safety Evaluation Summary: An evaluation concluded that the proposed change to the Technical Specification for the reactor vessel pressure limits, for normal operating modes, has been prepared in accordance with the requirements of 10 CFR 50, Appendix G, and in accordance with the acceptable methodology of regulatory Guide 1.99 R-2, using the provisions of paragraph c.1.1. The resultant pressure limits do not adversely affect nuclear safety, or plant operations, and does not create a new safety issue.

Document: FSAR Review (PFU 98-T1-155) (SE-000222-004)

Description of Change: These changes to the FSAR were required to correct misleading and incorrect statements that do not match the actual plant design and do not provide a correct picture of design basis details.

Safety Evaluation Summary: An evaluation concluded that the essential SSC functions will be protected and all Technical Specification Bases and margins of safety associated with the Technical Specifications will be maintained.

Document: FSAR Update Section 4.3.4 (PFU 98-T1-102) (SE-000224-021)

Description of Change: This change addressed editorial and three technical inaccuracies that are corrected or clarified by the document related to the OSTGs.

Safety Evaluation Summary: An evaluation concluded that no change in plant operation or change in the physical plant will arise from this document because this document updates and corrects inaccuracies in a

part of the FSAR only. None of the proposed changes were significant enough to alter the bases of the Technical Specifications.

Document: Safety Evaluation for 20% Average Steam Generator Tube Plugging – Technical Specification Change Request 279 (SE-000224-022)

Description of Change: This change justified up to a 20% average level of Steam Generator Tube Plugging with a maximum allowable tube plugging of 25% in any one steam generator and a maximum plugging asymmetry of 15% between steam generators. Changes to the Three Mile Island Nuclear Generating Station, Unit 1 Technical Specifications are also being requested.

Safety Evaluation Summary: An evaluation concluded that Three Mile Island Nuclear Generating Station, Unit 1 can safely operate at full power with 20% average steam generator tube plugging. Each of the FSAR transients and accidents, including LOCA and flow coastdowns has been evaluated or re-analyzed and found to meet all the applicable licensing basis criteria for an average of 20% plugged tubes per steam generator. This level of tube plugging was also found to have no impact on reactor trip setpoints and safety limits. It was also determined that 20% steam generator tube plugging would result in acceptable thermal-hydraulic performance of the steam generator. The small changes in RCS temperature resulting from tube plugging were determined to have an insignificant effect on structures, systems, and components.

Document: Technical Specification Change Request 277 (Letter 1920-98-20653) (SE-000224-023)

Description of Change: This change request makes changes to the tube repair criteria for steam generator tubes and makes administrative changes to the reporting requirements.

Safety Evaluation Summary: An evaluation concluded that the changes proposed do not create the possibility of an accident or malfunction of a different type than any previously evaluated in the Safety Analysis Report because there are no hardware changes involved nor changes to any operating practices. These changes involve only the OTSG tube inservice inspection surveillance requirements, which could only affect the potential for OTSG primary-to-secondary leakage. The proposed changes continue to impose flaw length limits for ID IGA to assure tube structural and leakage integrity, as confirmed by 12R tube pull sample examinations and pressure testing.

Document: FSAR Revision (PFU 98-T1-130) (SE-000225-003)

Description of Change: This revision to the FSAR changed Sections 4.1 and 5.4. The changes to Section 4.1.2 include correcting a reference to a paragraph that no longer exists and adding design information for control rod drives to other design information for the reactor coolant system so the design information will be in one place for eased of identification. Several changes to Section 5.1.4 include correcting an equation incorrectly copied from the design code B31.1 and adding clarification to a listing of inspections that are required only during the initial testing of a new system.

Safety Evaluation Summary: An evaluation concluded that there is no unreviewed safety question or requirement for a Technical Specification change as a result of this change because no technical change is made by this revision.

Document: RCS Hot Leg Vent Line Valves QCL Checklist (SE-000231-005)

Description of Change: This change involves the quality classification of two reactor coolant system valves, RC-V-53A/B. These valves provide the preferred normal operations pathway for venting of the RCS hot leg to the Reactor Coolant Drain Tank. The classification was changed from Y 1 1 to V 2 1.

Safety Evaluation Summary: An evaluation concluded that these valves are normally closed and do not perform any NSR function. Changing classification has no impact on nuclear safety or safe operations.

Document: Quality Classification Evaluation Form (SE-000232-012)

Description of Change: AS-TE-0489A, AS-TE-0490A, AS-TE-492A, AS-TE-493A, WDL-TE-0589B, WDL-TE-0492B, WDL-TE-0493B were downgraded from "RR" to "Other."

Safety Evaluation Summary: An evaluation concluded that the thermowells that these temperature elements fit into, not the temperature element itself, is the pressure boundary component. There is no NSR function or Regulatory Required commitment associated with these temperature elements.

Document: PFU 98-T1-191, FSAR Section 5.3.2 (SE-000244-003)

Description of Change: Tables 5.3-1 and 5.3-3 were deleted. The content of the tables and figure was maintained in other parts of the FSAR.

Safety Evaluation Summary: An evaluation concluded that there was no change to the operation or physical configuration of the ECCS Systems as a result of this FSAR change. This FSAR change had no affect on the accident analysis assumptions or conclusions. This change did not affect the probability of occurrence or the consequences of an accident or malfunction previously evaluated in the SAR. No accidents of a different type were introduced by this change. This change did not conflict with the Technical Specifications. This change did not reduce the margin of safety for any Technical Specification. This change did not have the potential to adversely affect nuclear safety or safe plant operations.

Document: FSAR Upgrade (PFU 98-T1-095) (SE-00251-005)

Description of Change: This is a change to Section 9.4 of the FSAR. The changes are editorial and clarifications related to the Spent Fuel Pool and Pumps.

Safety Evaluation Summary: An evaluation concluded that the probability of an accident, consequences or malfunction are not increased by this change because design flow to the SF Pools will be achieved even at 50 ft.

Document: FSAR Chapter 9.7 Upgrade (PFU 98-T1-047) (SE-000252-001)

Description of Change: This change upgraded the fuel handling description in FSAR Chapter 9.7. Sections 9.7.1 and 9.7.2 were updated to clarify the description and operation of the systems consistent with previous evaluations and requirements.

Safety Evaluation Summary: An evaluation concluded that the Fuel Handling Systems are not classified as safety related except for meeting anti-fall down criteria. The description change has no effect on any functions of the Fuel Handling or storage systems at TMI. No changes in operating procedures, system performance or equipment specifications occur from this change. Heavy loans handling in the Fuel Handling Building has been evaluated. No affects to the evaluations occur from the FSAR changes.

Document: FSAR Update (PFU 98-T1-089) (SE-000280-003)

Description of Change: These changes were made to the FSAR Chapter 11 to correct typographical errors and to make equipment lists more consistent.

Safety Evaluation Summary: An evaluation concluded that the possibility for a accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report was not created because these changes are just corrections to the equipment lists in the SAR and the deletion of the equipment at the WHPF, which does not create the possibility for an accident or malfunction. Actually preventing the creation of a mixed waste reduces TMI's liabilities for creating a waste that it cannot get rid of.

Document: FSAR Update (PFU 98-T1-080) (SE-000280-003)

Description of Change: The Radiation Monitoring System Section 11.4 was changed to ensure that it accurately reflects the current plant configuration. Several inaccuracies were corrected.

Safety Evaluation Summary: An evaluation concluded that no safety related equipment is physically altered by this PSU. This update merely reflects the current as-built condition of the Radiation Monitoring System. Furthermore, no different type of accident or malfunction is created by the minor corrections made in this PSU. Subsequently, the possibility for an accident or malfunction as previously evaluated in the FSAR is unaffected by the aforementioned corrections.

Document: FSAR Update 13 (PFU 98-T1-216) (SE-000280-008)

Description of Change: This change updated Section 11.5.8.5 of the FSAR.

Safety Evaluation Summary: An evaluation concluded that these changes will not affect nuclear safety or safe plant operations because this change complies with current Federal regulations for controlling access and postings to restricted areas. These changes will not increase the probability of occurrence of an accident previously evaluated in the safety analysis report because the methods of controls are the same as previously. Only the regulation location has changed.

Document: PFU to Sections 10.3, 10.4.1, and 10.5 (PFU 98-T1-220) (SE-000421-009)

Description of Change: This change updated Sections 10.3, 10.4, and 10.5 of the FSAR. Table 10.3.12 in Section 10.3 was changed to correctly identify the minimum flow required by the Moisture Separator Drain pumps. The first sentence in Section 10.4.1.1.c could be incorrectly interpreted to include piping between the hotwell and the EFW suction lines. These lines are not designed as Seismic Class 1. This change will clarify that only the piping between the CSTs and EFW pumps were designed Seismic Class 1. Section 10.5.2 will be changed to state that the FW pumps are supplied steam from the main steam sy, auxiliary steam, and extraction steam systems.

Safety Evaluation Summary: An evaluation concluded that these changes to the FSAR will in no way adversely affect nuclear safety or safe plant operations because the changes clarify or correct wording in the FSAR and are not associated with safety related equipment or operations.

Document: FSAR Update Section 10.4.2 (PTU 98-T1-132) (SE-000421-010)

Description of Change: This update corrected inaccuracies in the system design description in Section 10.4.2 and deletes Table 10.4-2.

Safety Evaluation Summary: An evaluation concluded that the changes were for clarification and accuracy only, and had no effect upon safety. The changes did not adversely affect nuclear safety or safe plant operations because the changes had no effect on safety or operations. Design descriptions are now correct by removing out-of-date and inaccurate chemistry data.

Document: PSU for FSAR Section 7.1.4 (Emergency Feedwater System) (SE-000424-011)

Description of Change: This PSU made a number of editorial changes to the FSAR Section 7.1.4.

Safety Evaluation Summary: An evaluation concluded that there is no change to the operation or physical configuration of the Emergency Feedwater System as a result of this PSU. Changes in this update are editorial in nature. The change has no affect on previously evaluated accident or equipment malfunction analyses in the SAR. No accidents or malfunctions of a different type are introduced. There is no reduction in the margin of safety nor any conflict with the Technical Specifications. No Technical Specification change is required.

Document: PSU for FSAR Section 10.6.2, EFW (PFU 98-T1-067) (SE-000424-012)

Description of Change: This PFU corrects inaccuracies and makes changes to the FSAR Section 10.6.2.

Safety Evaluation Summary: An evaluation concluded that implementation of this document will have no adverse affect on nuclear safety or safe plant operations. There is no change to the operation or physical configuration of EFW or Condensate Systems. Changes in this update correct inaccuracies in the existing FSAR text.

Document: FSAR Update of EFW Pump Design Data (SE-000424-013)

Description of Change: This PFU correctly identifies EF-P-1 and EF-P-2A/B design data as “nominal” design data in Section 10.6.1 and Table 10.6-1 as was specified in original procurement documentation.

Safety Evaluation Summary: An evaluation concluded that the change had no affect on previously evaluated accident or equipment malfunction analyses. No accidents or malfunctions of a different type are introduced by this editorial change. The safety analysis to determine minimum EFW flow is described in FSAR section 14.2.2.7. The safety analysis to determine minimum EFW flow is described in FSAR Section 14.2.2.7. The FSAR notes that the analysis demonstrated the adequacy of 500-gpm total flow – not the minimum acceptable EFW flow. Identifying FSAR Section 10.6 data as “nominal” does not affect the accident analysis.

Document: Technical Specification Bases Change for EFW Flow Capacity (SE-000424-014)

Description of Change: This Technical Specification revision is to remove auxiliary feedwater nominal pump capacities from Section Bases. The intent is to remove any potential confusion regarding the required flow delivery for the system in design basis events.

Safety Evaluation Summary: An evaluation concluded that the margin of safety as defined in the basis for any Technical Specification was not reduced. The Technical Specifications do not define a margin of safety for the Auxiliary Feedwater flow rates since they do not delineate the minimum design basis flow requirements. The required design basis flow rates are contained in the FSAR via PFU 2000-T1-020.

Document: FSAR Update (PFU 98-T1-205) (SE-000531-006)

Description of Change: This PFU summarizes TDR 1183 that presents the single failure analysis for the NR and NS Systems.

Safety Evaluation Summary: An evaluation concludes that the probability of occurrence or consequences of an accident or malfunction previously evaluated in the SAR is not increased because this evaluation makes no changes to the plant, nor does this document make changes to the design basis of the plant.

Document: Leakage Indication on 3/4 inch Line to NR-V27A (CAP T 1998-0747) (SE-000531-008)

Description of Change: This SE evaluated leakage indication on NR-V27A, which is a vent valve with about 6" of piping between itself and IC-C1A. IC-C1A is in the heat exchanger vault.

Safety Evaluation Summary: An evaluation concluded that this MNCR related only to piping maintenance replacement. There were no tests or experiments.

Document: PFU 98-T1-219 (SE-000534-008)

Description of Change: This PFU makes changes to prevent the loss of NS System corrosion inhibitor to the Susquehanna River.

Safety Evaluation Summary: An evaluation concluded that this PFU does not have the potential to adversely affect nuclear safety or safe plant operations because of the following: To prevent the loss of NS System corrosion inhibitor to the Susquehanna River, quarterly ES testing (SP 1303-5.2) isolates the NS System from the RR System by closing NS-V84. In addition, quarterly IST (SP 1300-3K) closes the RR-V3s. Closing NS-V84 or closing the RR-V3s isolates NS overpressure, makeup capability and RR System leak detection through NS-F1-76. This is acceptable because the leak detection will only be disabled during the duration of the testing and because TDR 1212 and Calculation C-1101-823-E6100-001, rev. 1, both for GL 96-06, show that significant voiding or water hammer of the AH-E1s and associated piping will not occur if the NS System overpressure (0 psig in the AH-E1s) or makeup capacity is isolated.

Document: FSAR Update (PFU 98-T1-094) (SE-000542-004)

Description of Change: This PFU change to Section 9.3.1 and Table 9.3-1 provides the exact list of components that the IC System cools. This change agrees with Drawing 302-620 and 302-650.

Safety Evaluation Summary: An evaluation concluded that the probability or the consequences of an accident or malfunction are not increased because operating with up to and including 2 IC coolers does not adversely impact safety because NR heat loads are not adversely affected. There is no possibility of a different type of accident because NR heat loads are maintained. There is no change in the margin of any Technical Specification because the NR coolers remain operable with 2 IC coolers in service.

Document: IC-C1A Stabilizing and Plugging (CAP/MNCR T1998-0099 R3) (SE-000542-005)

Description of Change: This is an evaluation of CAP/MNCR T1998-0099 R3 to evaluate the effect of plugging and stabilizing tubes in IC-C1A.

Safety Evaluation Summary: An evaluation concluded that the probability of occurrence or consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR is not increased because the SAR does not take credit for the heat removal capacity of the EC Coolers and the IC Coolers do not perform a nuclear safety related function. Note, when RB isolation occurs in response to an FSAR Chapter 14 accident, the IC Coolers are isolated from the Reactor Building components that they normally cool.

Document: Kr⁸⁵ Disposal (STP-1-98-0044)

Description of Change: The procedure was designed and implemented to dispose of two cylinders of KR⁸⁵ – Argon mixture via a monitored release via the Plant Ventilation System. The gases were excess quantities used in the calibration of airborne radioactivity effluent monitors.

Safety Evaluation Summary: A safety evaluation concluded that the quantities and concentrations of gas being released were a fraction of those seen in a normal Waste Gas Decay Tank release. Disposal of this gas was by way of a monitored release through a normal release point (Station Vent) is consistent with disposal of used or expired liquid byproduct sources through a monitored release through the Liquid Waste Disposal System. The changes will not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the SAR. Also that the proposed changes will not reduce the margin to safety as defined in the basis for any Technical Specification.

Document: Flush of Hot Spot Downstream of MU-V-14A (STP 1-98-0009)
Hot Spot Flush at MU-V-44 (STP 1-98-0007)

Description of Change: The purpose of these special temporary procedures was to flush hot spots at MU-V-14A and MU-V-44 to the Auxiliary Building Sump.

Safety Evaluation Summary: The Offsite Dose Calculation Manual covered this non-routine release. Therefore this release was governed by an already approved procedure that uses systems well within their original designed purpose. Hence, the safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve the probability of a decrease in the margin of safety; did

not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Document: Single Cell Battery Charge (STP 1-98-0039)

Description of Change: This STP placed a single cell charger around a cell exhibiting lower than desired float voltage on the station battery. The single cell charge is used to return a single cell running at lower than desired voltage to normal float voltage per the battery manufacturer's guidance.

Safety Evaluation Summary: If the battery cell involved in this procedure were removed from service, which this STP does not do, it would result in a battery capacity of approximately 101%. Electrical train separation was maintained and NSR electrical isolation was maintained with NSR fuses between the battery charger and the station battery. Therefore, the safety evaluation concluded that the revision did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Document: Pumping Industrial Well "C" (WT-P-40C) to the MDCT (STP 1-98-0031)

Description of Change: This change pumped water from WT-P-40C to the MDCT to provide a single monitored discharge point for the water. The well was pumped to shield the other two industrial wells and reduce tritium levels.

Safety Evaluation Summary: This STP did not affect Equipment or systems that were important to safety. Therefore, the health and safety of the workers and the public was not adversely affected. The dose resulting from this evolution was well below ODCM dose limits. Thus, the margin of safety was not reduced. Since the operation of the Pretreatment and Makeup Systems are not governed by the Technical Specifications, this STP did not require a change to the Technical Specifications.

Document: High Pressure Injection Nozzle Allowable Cycles (SE 000211-001) (PFU 98-T1-224)

Description of Change: The number of allowable design (test/non-test) High Pressure Injection (HPI) cycles identified in the Transient Cycle Log Book was revised. The change in allowable design (test/non-test) HPI cycles was from 130 actuation / 1000 test cycles to a ratio 50/140 with a maximum specified limit of 250 on HPI test cycles.

Safety Evaluation Summary: A revision to analysis performed by Babcock and Wilcox changed allowable HPI nozzle cycles documented in BWNT Document 32-117115-02. This document was revised as a result of a modification to HPI piping, which affected HPI nozzle loads. HPI system operation was not adversely affected by the revision to the number of allowable design cycles. An evaluation showed that the changes to the Transient Cycle Log Book did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Document: OP 1104-2 Makeup Pump Net Positive Suction Head and Gas Binding Concerns
Evaluation (SE 000211-019)

Description of Change: New operating limits were identified for maintaining both a Makeup (MU) tank pressure and level within a region defined by the curves on page 3 of calculation C-1101-211-E610-066 Revision 0 and MU-V-222 at a 1.25 turns from full closed throttled position whenever the reactor is critical.

The revised operating limits were based upon analyses using more conservative assumptions than previously considered. The MU tank operating limits were not revised significantly and throttling MU-V-222 provides greater assurance that the MU pump net positive suction head will be maintained. Throttling MU-V-222 did not significantly restrict MU flow for either normal operation or transients. Operation of the plant within the designated limits will ensure reliable operation of the HPI pumps.

Safety Evaluation Summary: The revised operating limits were determined to maintain the MU tank level and pressure within the defined operating region. The operating limits will be in effect whenever the reactor is critical thus ensuring reliable operation of the high-pressure injection pumps.

Document: Technical Specification Change Request No. 273 (SE 115201-051)

Description of Change: The Technical Specification Change Request (TSCR) incorporated alternate High Radiation Area controls that meet the requirements of 10 CFR 20.1601 and are consistent with Regulatory Guide 8.38. The alternate controls provided greater efficiency by reducing the number of areas in the plant required to be maintained locked so as to prevent unauthorized or unintended entry. Flashing warning lights provide a reasonable method to control access where lockable enclosure construction and use are impractical.

Safety Evaluation Summary: The proposed amendment is consistent with Regulatory Guide 8.38. There were no changes to equipment or system configuration. The proposed incorporation of an alternate high radiation area control was previously found to be acceptable by the NRC. An evaluation showed that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the probability of the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Document: Technical Specification Change Request No. 283 (SE 115201-056)

Description of Change: The Technical Specification Change Request (TSCR) proposed 1) revision to the 4KV Engineered Safeguards Bus Undervoltage Relay Degraded Voltage calibration be performed at an "annual" interval rather than the current "refueling" interval and 2) change the TS bases such that the degraded voltage relay as-left setpoint tolerance is revised from its existing range of 3760V -.53%, +.35% to an as-found setpoint tolerance, unless otherwise specified.

Safety Evaluation Summary: The proposed setpoint tolerance and calibration interval changes did not involve a reduction in probability of a margin of safety because they are intended to reduce the total degraded voltage relay setpoint uncertainties. This will provide greater confidence that minimum

voltages necessary to operate Nuclear-Safety-Related equipment are not exceeded. The proposed changes for degraded voltage relay pickup setpoint, turbine plant loading criteria, and CWP loading reduce the probability that the ES buses will be separated from their offsite power source during low grid voltage conditions. These proposed actions were consistent with the objective providing a reliable source of power for balance of plant auxiliaries and continuously available power supply for the ES equipment, as required by Technical Specification 3.7 bases. Therefore, the proposed changes will not decrease the margin of safety as defined in the basis of any Technical Specification.

Document: Primary Shield Wall Penetration Temperature (01101-153-5320-015)

Description of Change: The calculation was reevaluated to demonstrate the effect of localized elevated penetration temperatures on the concrete of primary shield wall. Prior inspection confirmed that no adverse conditions such as cracks or spalling associated with the elevated temperatures were evident. The increased temperatures were determined to be the result of gaps in the insulation and not a degradation of the insulation. The calculation identified that temperatures in the surrounding concrete fall below 150°F within 4 to 6 inches of the point exposed to the elevated temperatures. Thus, the general concrete temperature around the penetration is below 200°F even when the isolated resistance temperature detectors (RTD) indicate air temperatures above 200°F. Based on the results of the revised calculation, the concrete was found to remain in compliance with the American Concrete Institute Code 349 and section 5.6.2.b of the TMI-1 Final Safety Analysis Report.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Document: FSAR Change- Reassignment of Nuclear Services & Technical Support Functions to Other Divisions (SE 945100-161)

Description of Change: The FSAR was revised to reflect the elimination of the Nuclear Services & Technical Support Functions (NS&TS) Division and assimilation of its functions and responsibilities by the remaining Divisions. The Radiological Health & Safety Director assumed management of TMI Emergency Planning and reports to the Director TMI. The position of Environmental Affairs Director was eliminated and persons managing Radiological Health and Safety have responsibility for environmental affairs and Occupational Safety at their respective sites. The Manager, Plant Training reports to the Director TMI. The Director Nuclear Safety Assessment reports the President, GPU Nuclear.

Safety Evaluation Summary: All of the duties and responsibilities of the eliminated division have been retained in the new alignment and the site-based resources are unchanged. The revised GPU Nuclear organizational structure supporting the operation and maintenance of TMI in a manner that ensures the safety and health of the public and personnel on site. The GPU Nuclear management provides an organization with appropriate technical resources to operate and maintain the plant safely, provide the appropriate expertise and the checks and balances essential to safe operation.

An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Document: FSAR Update and Technical Specification Change Request No. 255, Post LOCA Hydrogen Control in Containment (SE-000901-002)

Description of Modification: This change updated analysis to establish the capacity of the Hydrogen Recombiner system and the length of time after an accident that the Recombiner should be turned on.

Safety Evaluation Summary: The changes ensured that the FSAR and The Technical Specifications were consistent with the design bases for Three Mile Island Nuclear Generating Station, Unit 1 with respect to the Post LOCA Hydrogen Recombiner System and the Reactor Building Hydrogen Purge System. Based on the safety evaluation it was concluded that there was no impact on nuclear safety or safe operations, nor were there any environmental concerns or unreviewed safety questions.

Document: FSAR Update (PSU 98-T1-002)

Description of Change: The change is intended to provide additional information on the radiation monitors and ventilation systems for the Waste Handling and Packaging Facility, the Chemical Cleaning Building, and the Respirator Laundry Maintenance Facility. These facilities were historically under the cognizance of TMI-2. However, upon entry of TMI-2 into Post Defueling Monitored Storage, these facilities were moved under the cognizance of Three Mile Island Nuclear Generating Station, Unit 1. A previous FSAR submittal (PFU 94-110) incorporated a description of the effluent monitors for these facilities into Section 11 of the FSAR. This submittal was intended to provide a more comprehensive description of these facilities by including a description of their ventilation systems in Section 9.8 of the FSAR, and by including block diagrams of the effluent monitors in Figure 11.4-1 of the FSAR.

Safety Evaluation Summary: The change did not adversely affect nuclear safety or safe plant operations. The operation of these ventilation systems and effluent monitors is not being changed, nor are any modifications being made to this equipment. Providing a description of these systems and equipment in the FSAR enhanced plant safety by ensuring an increased level of review if changes are proposed to the design or operation of these systems. The change did not affect the type or quantity of radiological effluents from the plant.

Document: FSAR Update (PSU 98-T1-003)

Description of Change: The purpose of this change was to remove the requirement for the Radiological Engineering Section to review the performance of the radiological control technicians.

Safety Evaluation Summary: This change did not affect plant operations or any direct action by personnel on the plant systems. The change in the reviewing criteria of Radiological Engineering will focus more broad based than just radiological control technicians. This change allowed for more comprehensive review of the radiation protection program and is therefore safer.

Document: FSAR Update (PFU 98-T1-004)

Description of Change: RM-L-10 was physically removed from the plant via EER 92-0041. This change more accurately described current configuration and basis for removal.

Safety Evaluation Summary: The safety evaluation concluded that the FSAR revision did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Document: FSAR Update (PFU 98-T1-005, PSU 98-T1-080)

Description of Change: This modification streamlined a wastewater disposal process by removing an unnecessary holding point. It removed the Turbine Building sump as a stopover point for Powdex Backwash Recovery wastewater. Other descriptions related to these systems were updated.

Safety Evaluation Summary: This modification produced no adverse effects to the environment when compared to how Powdex Backwash Recovery waste water was processed prior to the modification. This modification streamlines a wastewater disposal process by removing an unnecessary holding point. The modification does not involve an unreviewed safety question. Implementation of this modification did not adversely affect nuclear safety or safe plant operation. The modification did not involve an unreviewed safety question, did not impact any safety-related systems, and ensured adequate tracking of water transfers to the Industrial Waste Treatment System prior to release to the river.

Document: FSAR Update (PFU 98-T1-007), (SE-115403-008)

Description of Change: This change deleted outdated information, which is already described correctly in Section 14.2.2.3.3c, from Section 9.5.2.4. Several clarifications were made in Section 14.2.2.3.3c.

Safety Evaluation Summary: The safety evaluation concluded that crediting the reactor vessel internal flow path as a passive method of boron dilution following a LOCA until one of the two active methods, drop line or hot leg injection, can be initiated and becomes effective did not create an unreviewed safety question.

Document: FSAR Update (PSU 98-T1-008)

Description of Change: This change provided for bypassing the makeup system's prefilters, MU-F-2A/B, during normal operation. Based on data collected during STR 1-96-0016 and experience at other B&W plants, the makeup demins will filter most of the debris that is currently filtered by the MU-F-2s without adversely affecting resin performance, the resin's waste disposal classification, downstream filter life, or RCP seal performance. Bypassing the filters at other plants has significantly decreased the total number of makeup system filters used, saving dose and radwaste disposal costs.

Safety Evaluation Summary: The prefilters are not addressed in the Technical Specifications; therefore, the margin of safety defined in the Technical Specifications is not reduced. The probability of occurrence or the consequences of an accident evaluated in the SAR is not increased. This change did not increase the possibility of an accident different than any evaluated in the SAR.

Document: FSAR Update (PSU 98-T1-009), (SE 000534-004)

Description of Change: This change corrected the description of the normal position and post accident position for valves RR-V9A/B/C in Table 5.3-2.

Safety Evaluation Summary: This change is editorial and had no affect upon safety. It was not a new activity and was not a substantive revision to an activity or document. The subject change explains the conversion of the RCPs with standard seals to cartridge seals and reconfiguration of the existing piping to facilitate the advanced type of designed seal. The performance and function of the RCP and its interfacing systems were unchanged throughout normal to emergency/abnormal operation. There were no unreviewed safety questions as a result of the subject change.

Document: FSAR Update (PSU 98-T1-010)

Description of Change: The system description was changed to indicate that only one main vacuum pump will be in operation during normal plant conditions.

Safety Evaluation Summary: This change will not adversely affect nuclear safety or safe plant operations. As sated in Section 10.4.4 of the FSAR, the vacuum system is not required for the safe shutdown of the plant. Also, although the FSAR considers each pump a 50% capacity pump, operation with only one vacuum pump is adequate. The system was designed to remove up to 30 SCFM from the condenser; however, actual data shows non-condensable and in-leakage total less than 10 SCFM.

Document: FSAR Update (PSU 98-T1-011), (SE-418800-001)

Description of Change: The "normal valve position" listed in Table 5.3-2 is currently listed as "open." However, since completion of 11R outage, the "normal valve position" is "closed." This change corrects the table to "closed."

Safety Evaluation Summary: This change is not expected to decrease the margin of safety as described in the bases to any Technical Specification. The modification does not impact any safety system or the bases of any Technical Specification.

Document: FSAR Update (PSU 98-T1-012), (SE-945100-088, 945100-089)

Description of Change: Changes were made to reflect new organizational structure, new position titles, and new reporting relationships.

Safety Evaluation Summary: The safety evaluation concluded that: (1) because this activity did not involve a significant increase in the probability of occurrence or consequences of an accident previously considered; and did not increase the probability or consequences of a malfunction of equipment important to safety; and did not decrease the margin of safety as defined in any Technical Specification, this activity

did not involve a significant hazards consideration; (2) there was reasonable assurance that the health and safety of the public was not endangered by operation in the proposed manner; and (3) plant operations was conducted in accordance with rules and regulations. Therefore, an unreviewed safety question did not exist and implementation of the reorganization and its description in the FSAR were acceptable. The reorganization of the GPU nuclear engineering function did not effect any plant system, subsystem, structure, or component.

Document: FSAR Update (PFU 98-T1-014), (SE-000-411-013)

Description of Change: FSAR 10.3.1.2 and Table 10.3-1 contained information that was incorporated from the procurement specification. Since much of this data is not part of the nuclear safety design basis, it is not necessary for it to be in the FSAR and this change removed it.

Safety Evaluation Summary: The Safety Evaluation evaluated the effects of clarifying the delta P and actuating time requirements for MS-V1A/B/C, MS-V2A/B, and MS-V8A/B and the removal of the actuating time and delta P from the FSAR. The evaluation demonstrated that no unreviewed safety question was generated by the change and that it can be implemented under 10 CFR 50.59.

Document: FSAR Upgrade (PFU 98-T1-016), (SE-412678-001)

Description of Change: The purpose of this configuration change is to replace the nitrogen trailers, which currently supply primary plant nitrogen, with a group of permanently installed cylinders divided into two nitrogen cylinders divided into two nitrogen banks to provide high pressure nitrogen and a liquid nitrogen tank, which will provide low pressure nitrogen. They will connect to existing plant nitrogen connections.

Safety Evaluation Summary: This change did not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report because the only change to the plant was that a new supply for primary plant nitrogen was installed with the same quality nitrogen and approximately the same volume of nitrogen on site.

Document: FSAR Upgrade (PFU 98-T1-017), (SE-412680-001)

Description of Change: This configuration change described the installation of several pieces of equipment and piping, which removed oil and accumulated solids from the auxiliary building sump, that contributed to high sulfur problems in the reactor coolant bleed tanks in the past. This change was part of a larger effort to remove this type of material before it gets into the miscellaneous waste storage tank and the miscellaneous waste evaporator.

Safety Evaluation Summary: The safety evaluation showed that this activity did not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis Report regarding the oil skimmer and recirculation piping because the only change to the plant is that some cleanup is provided for the auxiliary building sump water prior to sending that water to the rad waste system. The added piping was evaluated to insure that is not degraded. Installing piping to allow sending the sumps, identified in Section 2.4, to the auxiliary building sump adds the ability to cleanup that water prior to sending it to the evaporator. The maximum radiological loading of the filter to allow burial was evaluated.

Document: FSAR Upgrade (PFU 98-T1-018), (SE-225012-001, SE-225012-002)

Description of Change: This change described electrical modifications to the TMI-2 plant that change the FSAR system descriptions and modes of operation. The electrical power from the 230kV grid is transferred to the 13.2kV grid. It also removed alarms monitored by the Three Mile Island Nuclear Generating Station from the Unit 1 process computer that are no longer used. It described backup power for regulated AC and DC that is provided from the SBO MCC 1B-SBO-Diesel.

Safety Evaluation Summary: The Safety Evaluation showed that these modifications did not affect any Technical Specification item of Section 9, and did not involve containment boundary or fuel movement. All work was performed in TMI-2. There were no safety concerns and no margins of safety reduced by these changes.

Document: FSAR Upgrade (PFU 98-T1-020), (SE-412692-001)

Description of Change: This change described installing a demineralizer connected to the outlet of the "B" moisture separator pump. This demineralizer will remove impurities from the secondary plant.

Safety Evaluation Summary: This change does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report because the configuration change affects no equipment that is important to safety.

Document: FSAR Upgrade (PFU 98-T1-021)

Description of Change: These changes were typographical changes, which were incorrectly transcribed in Update 10 via PFU 91-T1-109.

Safety Evaluation Summary: The evaluation showed that these changes were editorial in nature and had no effect on safety or plant operation.

Document: FSAR Upgrade (PFU 98-T1-022), (SE-412609-001)

Description of Change: This change explained the replacement of the existing electronic portion of the Electro-Hydraulic Control system with a fault tolerant Digital Turbine Control System (DTCS). The DTCS is a General Electric Mark V digital microprocessor-based system.

Safety Evaluation Summary: The safety evaluation concluded that this change did not introduce any new accident or malfunction not previously evaluated, nor did the change increase the likelihood of occurrence or consequences of any accident as analyzed in the Three Mile Island Nuclear Generating Station, Unit 1 UFSAR. This modification did not decrease the margin of safety as described in the Technical Specification because the modification did not impact any system safety functions. The evaluation concluded that there was no unreviewed safety question and no changes to the Technical Specifications were required.

Document: FSAR Upgrade (PFU 98-T1-025)

Description of Change: This change was minor clarifications and makes corrections to indicate that reduced pressure testing performed prior to plant initial startup was never used to guide or justify continued reduced pressure testing. This change also clarified the pressure that was used for containment leak testing since initial startup. It clarified that pre-operational leak testing leak tested isolation devices in addition to valves.

Safety Evaluation Summary: The FSAR changes in this update reflected the Reactor Containment Testing Program as it has been managed since initial plant startup in 1974. The NRC guidance in NUREG-1074 for containment testing were incomplete and when they finalized the low pressure testing provision, which our Pre-Operational Leak Testing was aimed at justifying, was discontinued as an option. The original FSAR discussions on reduced pressure testing are misleading, if they are not amended to show that we have not used that option. Showing the way we have been testing, with NRC acceptance, does not have the potential to adversely affect Nuclear Safety.

Document: FSAR Upgrade (PFU 98-T1-027), (SE 128112-146, SE 128112-175)

Description of Change: This change corrected the identification of the instruments used to monitor watts and vars out of the emergency diesel generators and connections to the plant computer.

Safety Evaluation Summary: The subject instruments are not specifically mentioned in the Technical Specifications. The margin of safety as defined in the basis for any Technical Specification is not reduced. The Limiting Condition for Operation, as described in Section 3.7 of the Technical Specifications, is not changed. This change will not affect the operability of the diesel generators. The metering circuits do not result in an interface with any equipment used to protect or monitor the environment.

Document: FSAR Upgrade (PFU 98-T1-028), (SE 412024-004)

Description of Change: This change corrected the identification of an instrument in Table 7.3-1, identified an additional signal source, and contained editorial changes to eliminate duplication. All changes will result in correctly describing plant configuration changes.

Safety Evaluation Summary: The safety evaluation showed that no plant changes will result from, or are causing, this FSAR change. This change solely reflects actual plant configuration. Thus no Technical Specification is required, and margin of safety is not affected.

Document: FSAR Upgrade (PFU 98-T1-029), (SE 412244-001)

Description of Change: This change corrects equipment identification designations, corrects locations of RSD equipment, and eliminates duplicity.

Safety Evaluation Summary: There are no Technical Specifications affected by this change. This change enhanced safety by describing means for the operator to bring the plant to a safe shutdown during the postulated fire that damages the normal safe shutdown circuits.

Document: FSAR Upgrade (PFU 98-T1-030), (SE-412281-004 R2)

Description of Change: This change added information regarding the new control room computer consoles CCL and CCR.

Safety Evaluation Summary: The plant computer system is not safe shutdown related and, therefore, does not have a safety function. The plant computer system is utilized by control room operators for alarm monitoring, performance monitoring, CRT display, and data logging activities. This change did not involve the probability of an unreviewed safety question or new environmental impact and did not adversely affect nuclear safety.

Document: FSAR Upgrade (PFU 98-T1-031), (SE-418806-002)

Description of Change: This change described the present as-installed configuration of the strong motion recording system, which will trigger alarms if either triaxial sensor exceeds a preset limit rather than just the basemat sensor as previously stated.

Safety Evaluation Summary: The safety evaluation showed that this change was more conservative and thus there is no adverse affect on nuclear safety, and there is no more probability of occurrence or increased consequences of any malfunction of equipment or accident not previously evaluated.

Document: FSAR Upgrade (PFU 98-T1-032)

Description of Change: The purpose of this change was to reflect actual plant configuration. Removal of the hydrogen analyzers from the EQ master list was accomplished in 1987, and justified by memo 5710-87-340. Changes to alarm nomenclature reflect actual wording on the equipment, and operating procedures were verified to reflect the proper terminology.

Safety Evaluation Summary: The safety evaluation showed that no plant changes will result from, or were causing, this FSAR change. This change solely reflected actual plant configuration. Thus no Technical Specification change was required, and the margin of safety was not affected.

Document: FSAR Upgrade (PFU 98-T1-033)

Description of Change: This upgrade involved change of titles, removal of training requirements, determining radiation dose to personnel on each RWP entry instead of daily or weekly, removal of references to Regulatory Guide 8.4 and 8.15, removal of references to the Radiological Controls Procedure Manual, changes in organization and responsibilities, change in dosimetry requirements for handling sources, and change in specific air sampling and monitoring equipment and locations.

Safety Evaluation Summary: The safety evaluation demonstrated that these changes would not affect nuclear safety or safe plant operations because these changes did not affect plant components or how personnel interface with plant systems.

Document: FSAR Upgrade (PFU 98-T1-034)

Description of Change: This change was editorial changes to Section 1.4.5.

Safety Evaluation Summary: The safety evaluation demonstrated that these changes would not affect nuclear safety or safe plant operations because these changes did not affect plant components or how personnel interfaced with plant systems.

Document: FSAR Upgrade (PFU 98-T1-035)

Description of Change: This change is an editorial correction to indicate that there are no electric power connections to the manual isolation valves HR-V-2A/B and HR-V-4A/B.

Safety Evaluation Summary: The safety evaluation demonstrated that there would be no adverse affects to nuclear safety or safe plant operations because there is no physical change to the plant. The absence of power to these valves was evaluated in the original design. Also the operation of the valves is not time critical.

Document: FSAR Upgrade (PFU 98-T1-036)

Description of Change: This change is editorial to remove comparisons to the Oconee plant and other specifics that no longer apply.

Safety Evaluation Summary: This editorial change did not affect the probability or consequence of and accident or malfunction of equipment important to safety nor does the change create the possibility of an accident or malfunction of a different type. The differences between TMI and Oconee were found to be acceptable at the time of licensing and changes since that time were reviewed for impact on safety. This change does not affect the Technical Specifications.

Document: FSAR Upgrade (PFU 98-T1-037)

Description of Change: This change described a new control scheme installed for DCCW flow indication.

Safety Evaluation Summary: The new control scheme does not decrease the reliability of the present system. Existing control valves and valve operators are used. Valves are lined-up for maximum cooling flow during normal plant operation with the RCS temperature above 250°F and they will remain in that mode if the LPI were to occur. A failure in the new control system does not create a condition different than the one created by a failure in the present system. This modification did not adversely affect the probability of nuclear safety and did not involve an unreviewed safety question.

Document: FSAR Upgrade (PFU 98-T1-038), (SE-135400-22)

Description of Change: This change covers the use of gadolinia bearing fuel and recognizes that soluble boron will balance integral absorber burnup, if necessary.

Safety Evaluation Summary: The safety evaluation concluded that the cycle design and operating limits developed for cycle 11, including the use of the Mkb10 fuel assembly, gadolinia integral burnable poison and the insertion of four LTA's do not create any unreviewed safety questions and support full power operation at the rated power level for a cycle length of 650 ± 15 EFPD without endangering the health and safety of the public.

Document: FSAR Upgrade (PFU 98-T1-039)

Description of Change: This change made corrections, editorial updates, and added some information regarding actions that were taken to improve reliability and accuracy of the SPDS.

Safety Evaluation Summary: The safety evaluation concluded that the SPDS is a software package on the PPC. This system provides information to the control room personnel and is not responsible for any control or action in the plant. The SPDS system is not important to nuclear safety or safe operation of the plant since all its data is redundant to plant equipment in the control room.

Document: FSAR Upgrade (PFU 98-T1-040)

Description of Change: This change added editorial changes and amplification for clarity.

Safety Evaluation Summary: An evaluation showed that the editorial and clarification changes would not adversely affect nuclear safety or safe plant operations, as they did not change the previously described systems. The changes did not alter how the components were designed or operated.

Document: FSAR Upgrade (PFU 98-T1-041)

Description of Change: This is an editorial change to delete an incorrect statement that there is an auto-start alarm for CO, CO Booster, and HD pumps.

Safety Evaluation Summary: This change will not affect safe plant operations or nuclear safety, since it reflects actual as-built conditions. Review of 1105-21 and 1105-10A show that these alarms do not exist, and review of design basis documents revealed no indication that these alarms were ever required or installed. If an operating pump were to trip, it would annunciate an alarm indicating so, which would alert the CRO to verify that the standby pump started.

Document: FSAR Upgrade (PFU 98-T1-042)

Description of Change: This was an editorial change to change system designator from WDG to HM to reflect actual plant nomenclature.

Safety Evaluation Summary: This was an editorial change to correct nomenclature of the hydrogen monitor instruments. Therefore there was no actual change to form, function, or operation of these instruments. The change was solely to reflect actual plant nomenclature.

Document: FSAR Upgrade (PFU 98-T1-043)

Description of Change: Corrected a typographical error for the word, "although."

Safety Evaluation Summary: This was an editorial change to correct a misspelled word. Therefore there was no actual change to form, function, or operation of any equipment. The change was solely typographical.

Document: FSAR Upgrade (PFU 98-T1-044)

Description of Change: This change made sections 7.2.3.2.b and 10.7.1.b consistent with each other regarding ICS runback capabilities.

Safety Evaluation Summary: This was an editorial change to the FSAR not to the operation of the ICS. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did it change or create the possibility of an accident or malfunction of a different type. The ICS is not included in the Technical Specifications and there is no change required to it or are any Technical Specification margins affected.

Document: FSAR Upgrade (PFU 98-T1-045)

Description of Change: This change modified the frequency of fire support training from "annual" to "periodic" and revised the FSAR to be consistent with the frequency requirements specified in procedure AP1038. In addition, several editorial changes were made.

Safety Evaluation Summary: The change did not affect TMI's ability to achieve or maintain and monitor shutdown in the event of fire nor did it affect TMI's ability to minimize radiation releases in the event of fire. Therefore this change had no affect on nuclear safety. Also federal, state, local, industry, and Insurance regulations do not identify a requirement to provide fire support training. The fire support training program and training frequency is administratively controlled by AP1038, which requires safety determinations/evaluations before revision.

Document: FSAR Upgrade (PFU 98-T1-046)

Description of Change: This change recognized a topical report approved by a NRC SER and outlines part of it pertaining to a method to analyze xenon oscillations in the event that a core reload design includes operation with axial power shaping rods withdrawn.

Safety Evaluation Summary: This change only recognized an approved analysis method that may be used to justify a different way to operate the plant, but did not in itself change the way the plant is operated.

Document: FSAR Upgrade (PFU 98-T1-047)

Description of Change: This change updated Chapter 9.7 of the FSAR describing aspects of fuel handling at TMI.

Safety Evaluation Summary: The only fuel handling systems that are classified as safety related are those related to anti fall down criteria of heavy loads. The description changes to the FSAR had no affect on any functions of the fuel handling or storage systems at TMI. No changes in operating procedures, system performance, or equipment specifications occurred from this change.

Document: FSAR Upgrade (PFU 98-T1-048)

Description of Change: The change updated and described fuel and core criteria In FSAR Chapter 1.4 at TMI. The description changes clarified and corrected the discussion of fuel storage and discussed power oscillations to be consistent with other existing chapters of the SAR.

Safety Evaluation Summary: The margin of safety defined in the SAR was not reduced since the inputs to the fuel handling accident analyses were not adversely affected.

Document: FSAR Upgrade (PFU 98-T1-050)

Description of Change: This was an editorial change in the basis for once-through-steam-generator high level limit.

Safety Evaluation Summary: This was an editorial change to the FSAR, not to the operation of the ICS. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type. The ICS is not included in the Technical Specifications and therefore there is no change required to it or are any Technical Specification margins affected.

Document: FSAR Upgrade (PFU 98-T1-051)

Description of Change: This change restored and corrected the reactor demand equation to that originally found in the FSAR. This change also deleted various symbols that were not used in the text.

Safety Evaluation Summary: This was an editorial change to the FSAR, not to the operation of the ICS. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type. The ICS is not included in the Technical Specifications and therefore there was no change required to it nor were any Technical Specification margins affected.

Document: FSAR Upgrade (PFU 98-T1-052)

Description of Change: This change deleted the statement that implies that the BIRO thermocouples, extension cables, and interfacing connectors are not qualified to Class 1E requirements because the 16 BIRO thermocouples were upgraded in the 9R refueling outage.

Safety Evaluation Summary: An evaluation concluded that there was no change to the operation or physical configuration of the Backup Incore Thermocouple Readout System as a result of this update. The change had no affect on previously evaluated accident or equipment malfunction analyses in the SAR. No accidents or malfunctions of a different type were introduced. There was no reduction in the margin of safety or any conflict with the Technical Specifications. No Technical Specification change was required.

Document: FSAR Upgrade (PFU 98-T1-053)

Description of Change: This change made editorial changes and corrected inaccuracies in Table 7.3-2.

Safety Evaluation Summary: There was no change to the operation or physical configuration of the accident monitoring instrumentation as a result of this update. The change had no affect on previously evaluated accident or equipment malfunction analyses in the SAR. No accidents or malfunctions of a different type were introduced. There was no reduction in the margin of safety or any conflict with the Technical Specifications. No Technical Specification change was required.

Document: FSAR Upgrade (PFU 98-T1-054)

Description of Change: This change updated text and figures, which dealt with the names of schools, industries, and nursing homes located within 10 miles of the Three Mile Island site, based upon the 1990 census information.

Safety Evaluation Summary: These changes had no affect on nuclear safety since it did not involve any operations of the plant. The margin of safety as defined is not dependent upon these changes and therefore will not reduce the margin of safety.

Document: FSAR Upgrade (PFU 98-T1-055)

Description of Change: This change was an update to delete functions that are addressed in other licensing base documents. Present functions list is redundant and in some areas inaccurate due to organizational changes already approved in other licensing base documents.

Safety Evaluation Summary: This change did not impact equipment operation or maintenance. It also did not reduce present commitments, and therefore will not increase the consequence of an accident or equipment failure.

Document: FSAR Upgrade (PFU 98-T1-057)

Description of Change: This change was editorial, corrected inaccuracies regarding selection for indication and compensation, and reflected as-built conditions.

Safety Evaluation Summary: This was an editorial change to the FSAR, not to the operation of the ICS. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type. The ICS is not included in the Technical Specifications and therefore, there is no change required to it or are any Technical Specification margins affected.

Document: FSAR Upgrade (PFU 98-T1-058)

Description of Change: This was an editorial correction to correct inaccuracies regarding delta T_c and correct inaccuracies regarding selection and averaging of inputs.

Safety Evaluation Summary: This was an editorial change to the FSAR, not to the operation of the ICS. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor does the change create

the possibility of an accident or malfunction of a different type. The ICS is not included in the Technical Specifications and therefore there is no change required to it or are any Technical Specification margins affected.

Document: FSAR Upgrade (PFU 98-T1-059)

Description of Change: This was an editorial correction.

Safety Evaluation Summary: This was an editorial change to the FSAR. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type. There was no change required to the Technical Specifications nor are any Technical Specification margins affected.

Document: FSAR Upgrade (PFU 98-T1-060)

Description of Change: This change corrected inaccuracies and helped to clarify the operation of the MS-V-4s.

Safety Evaluation Summary: This was an editorial change to the FSAR. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type. There was no change required to the Technical Specifications nor were any Technical Specification margins affected.

Document: FSAR Upgrade (PFU 98-T1-061)

Description of Change: This was an editorial change to Section 7.3.2.2.b.9 to eliminate unnecessary information and make some corrections.

Safety Evaluation Summary: This was an editorial change to the FSAR, not to the operation of the ICS. There is no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type. The ICS is not included in the Technical Specifications and therefore, there is no change required to it or are any Technical Specification margins affected.

Document: FSAR Upgrade (PSU 98-T1-062)

Description of Change: This change makes editorial corrections in Section 7.2.

Safety Evaluation Summary: This change had no affect on the rod withdrawal accident analysis that relies on the RPS for this protection. The FSAR notes that the CRD Automatic Sequencer and Sequence Monitor interlocks are not intended to conform to IEEE 279-1971 (Criteria for Protection Systems for Nuclear Power Generating Stations) requirements. Therefore, the change had no affect on previously evaluated accident or equipment malfunction analyses. No accidents or previously evaluated accident or equipment malfunction exists. No accidents or malfunctions of a different type are introduced. The

change does not conflict with Technical Specification 3.5.2.5. There is no reduction in the margin of safety; no Technical Specification change is required.

Document: FSAR Upgrade (PFU 98-T1-063)

Description of Change: This change corrected inaccuracies and made editorial changes to Sections 7.3 and 7.5.

Safety Evaluation Summary: There was no change to the operation or physical configuration of the Incore Monitoring System as a result of this PSU. The change had no affect on previously evaluated accident or equipment malfunction analyses. No accidents or malfunctions of a different type were introduced. The change was consistent with Technical Specification 3.5.4 and had no affect on the Core Operating Limits. There was no reduction in the margin of safety; no Technical Specification change was required.

Document: FSAR Upgrade (PFU 98-T1-066)

Description of Change: This change was editorial to correct references to figure numbers in Section 2.5.

Safety Evaluation Summary: This is an editorial change to the FSAR. There is no impact on plant safety or safe plant operations. The change does not affect the probability or consequence of an accident or malfunction of equipment important to safety nor does the change create the possibility of an accident or malfunction of a different type. There is no change required to the Technical Specifications nor are any Technical Specification margins affected.

Document: FSAR Upgrade (PFU 98-T1-067)

Description of Change: This change corrected inaccuracies and added information to Section 10.6.

Safety Evaluation Summary: There was no change to the operation or physical configuration of EFW or Condensate systems. Changes in this update corrected inaccuracies in the existing FSAR test. The change has no affect on previously evaluated accident or equipment malfunction analysis in the SAR. No accidents or malfunctions of a different type are introduced. There was no reduction in the margin of safety or any conflict with the Technical Specifications. No Technical Specification change was required.

Document: FSAR Upgrade (PFU 98-T1-069), (SE-113202-684)

Description of Change: This change made editorial corrections, provided as-built conditions, and added clarifications.

Safety Evaluation Summary: None of the changes required a Technical Specification change, no margin of safety in any Technical Specification was reduced (none apply), nor did the changes adversely affect nuclear safety or safe plant operations. There was no affect on the probability or consequences of any accident previously evaluated nor was the possibility of an accident or malfunction of a different type created.

Document: FSAR Upgrade (PFU 98-T1-070), (SE-CMR-113202-368)

Description of Change: This was an editorial change to correct terminology and add information.

Safety Evaluation Summary: None of the changes required a Technical Specification change, no margin of safety in any Technical Specification was reduced (none apply), nor did the changes adversely affect nuclear safety or safe plant operations. There was no affect on the probability or consequences of any accident previously evaluated nor was the possibility of an accident or malfunction of a different type created.

Document: FSAR Upgrade (PFU 98-T1-071)

Description of Change: This change revised Section 12.9 to include references to 10 CFR 50, Appendix R, Section III.K.1 through 8 and APCSB 9.5-1.

Safety Evaluation Summary: This change improved the basis statement and is already implemented based upon NRC approval (see license condition 2.c.(4)) of other licensing basis documents. Changing Section 12.9 will not adversely affect nuclear safety or safe plant operations. No margin of safety as defined in any Technical Specification was reduced nor did any Technical Specification apply. There was no affect on the probability of occurrence, or consequences of an accident or malfunction previously evaluated nor was there the possibility of an accident or malfunction of a different type created by this change.

Document: FSAR Upgrade (PFU 98-T1-072)

Description of Change: This was an editorial change to correct typographical errors, errors in references to other FSAR Tables, and inclusion of Table 14E-4 that was accidentally omitted.

Safety Evaluation Summary: An evaluation concluded that none of the changes required a Technical Specification change, no margin of safety in any Technical Specification was reduced (none apply), nor will the changes adversely affect nuclear safety or safe plant operations. There was no affect on the probability or consequences of any accident previously evaluated nor was the possibility of an accident or malfunction of a different type created.

Document: FSAR Upgrade (PFU 98-T1-073)

Description of Change: Technical Specification Change Request deleted and modified record types. This change referenced the applicable Technical Specification Section and deleted specific references.

Safety Evaluation Summary: This was an editorial change to the FSAR. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type. There was no change required to the Technical Specifications nor were any Technical Specification margins affected.

Document: FSAR Upgrade (PFU 98-T1-074), (SE-41262-001)

Description of Change: This change involved the installation and use of a demineralizer system and the removal of the old system.

Safety Evaluation Summary: Installation and use of a demineralizer system and the reconfigured evaporator distillate demineralizer complies with the intent to Regulatory Guide 1.143. The plant margin of safety was not reduced by the use of this modification. Nuclear safety and safe plant operation were not adversely affected. There was not an increase in the probability or consequence of an accident previously evaluated in the SAR. No radiological safety concern existed. There was no unresolved safety question. No new environmental concern was created by this modification. Technical Specification changes were needed for final implementation, although not for the 10-R tie-ins. NRC approval was required for the Technical Specification changes. Essentially, radwaste will be processed in radwaste equipment located in buildings designed or evaluate for radwaste. Outside tanks and piping in the Turbine Building will hold water currently designated for release to the environment or subject to release in the event of a seismic event. This configuration change was acceptable.

Document: FSAR Upgrade (PFU 98-T1-075)

Description of Change: This change was editorial corrections to Section 7.1.4.

Safety Evaluation Summary: There was no change to the operation or physical configuration of the Emergency Feedwater Water system as a result of this change. Changes in this update were editorial in nature. The change had no affect on previously evaluated accident or equipment malfunction analyses in the SAR. No accidents or malfunctions of a different type were introduced. There was neither reduction in the margin of safety nor any conflict with the Technical Specifications. No Technical Specification change was required.

Document: FSAR Upgrade (PFU 98-T1-076)

Description of Change: This was an editorial change to reflect the as-built condition of the indicators for the OTSG outlet pressure indicators.

Safety Evaluation Summary: This was an editorial change to the FSAR and did not affect the operation of the ICS. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type. The ICS was not included in the Technical Specifications therefore there was no change required to it or were any Technical Specifications margins affected.

Document: FSAR Upgrade (PFU 98-T1-077)

Description of Change: This change corrected a minor editorial error in Section 7.1.1.4.

Safety Evaluation Summary: This is an editorial change to the FSAR and did not affect the operation of the RPS. There is no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type.

Document: FSAR Upgrade (PFU 98-T1-078), (SE-412626-001)

Description of Change: This change made minor corrections in Section 7.3.1.2, changes Figure 7.3-1 to reflect changes from source range upgrade, and changed Figure 7.3-2 to more accurately depict NI flux ranges.

Safety Evaluation Summary: None of the changes required a Technical Specification change, no margin of safety in any Technical Specification was reduced, nor would the changes adversely affect nuclear safety or safe plant operations. There was no affect on the probability or consequences of any accident previously evaluated nor was the possibility of an accident or malfunction of a different type created.

Document: FSAR Upgrade (PFU 98-T1-083)

Description of Change: This was an editorial change to clarify the nitrogen pressure to electrical penetrations.

Safety Evaluation Summary: This was an editorial change to the FSAR and did not affect the operation of the nitrogen system. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type.

Document: FSAR Upgrade (PFU 98-T1-084)

Description of Change: This was an editorial change to correct listings of air compressors in Section 9.10.3.2.

Safety Evaluation Summary: This was an editorial change to the FSAR and did not affect the operation of the compressed air system. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type.

Document: FSAR Upgrade (PFU 98-T1-085)

Description of Change: This was an editorial change to provide a better and more complete description of the sequencing of air compressors in Section 9.10.1.2.

Safety Evaluation Summary: This was an editorial change to the FSAR and did not affect the operation of the compressed air system. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type.

Document: FSAR Upgrade (PFU 98-T1-085)

Description of Change: This change was an editorial clarification of the role of the hydrogen recombiners after an accident in Section 6.5.1.3.

Safety Evaluation Summary: This was an editorial change to the FSAR and did not affect the operation of the compressed air system. There was no impact on plant safety or safe plant operations. The change did

not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type.

Document: FSAR Upgrade (PFU 98-T1-087)

Description of Change: This change was intended to update the description of the dilution of liquid effluents from TMI Unit 1 after they have been discharged into the Susquehanna River in Section 11.2.5.

Safety Evaluation Summary: This was an editorial change to the FSAR and did not affect the operation of the plant. There was no impact on plant safety or safe plant operations. The change did not affect the probability or consequence of an accident or malfunction of equipment important to safety nor did the change create the possibility of an accident or malfunction of a different type.

Document: FSAR Upgrade (PFU 98-T1-088)

Description of Change: The purpose of this change was to provide a reference in Section 8.6 to Calculation C-1101-424-5360-043, which determined the Station Blackout required condensate inventory for decay heat removal specified in Section 8.5.3 of the FSAR.

Safety Evaluation Summary: There was no change to the operation or physical configuration of the plant as described on the FSAR. There was no affect on Technical Specification 3.4.1.1.c, which specified condensate storage tank inventory requirements. The update did not involve any tests or experiments. No Technical Specification change was required.

Document: FSAR Upgrade (PFU 98-T1-089)

Description of Change: This change described the change in location for the MW Evaporator Feed Tank Vents and added the function of deborating demineralizers using cation resin for de-lithiating. Several editorial corrections were made in Chapter 11.

Safety Evaluation Summary: None of the changes required a Technical Specification change, no margin of safety in any Technical Specification was reduced, nor would the changes adversely affect nuclear safety or safe plant operations. There was no affect on the probability or consequences of any accident previously evaluated nor was the possibility of an accident or malfunction of a different type created.

Document: FSAR Upgrade (PFU 98-T1-096)

Description of Change: The purpose of this change was to correct errors in the test description of the Reactor Building Fans and correct the number of components tested in Section 1.4.59.

Safety Evaluation Summary: The FSAR changes were for clarification and accuracy only, and had no affect on safety. None of the changes required a Technical Specification change, no margin of safety in any Technical Specification was reduced, nor would the changes adversely affect nuclear safety or safe plant operations. There was no affect on the probability or consequences of any accident previously evaluated nor is the possibility of an accident or malfunction of a different type created.

Document: FSAR Upgrade (PFU 98-T1-097)

Description of Change: The purpose of this change was to correct errors in the system design description, and to rewrite portions of Section 5.3.3 to make it more understandable. Clarifications and corrections were made to this section.

Safety Evaluation Summary: The FSAR changes were for clarification and accuracy only, and had no affect on safety. None of the changes required a Technical Specification change, no margin of safety in any Technical Specification was reduced, nor would the changes adversely affect nuclear safety or safe plant operations. There was no affect on the probability or consequences of any accident previously evaluated nor was the possibility of an accident or malfunction of a different type created.

Document: FSAR Upgrade (PFU 98-T1-098)

Description of Change: This change corrected several editorial inaccuracies in Section 9.2.2.

Safety Evaluation Summary: The changes were minor, but enhanced the FSAR by correcting the errors. No safety related function was being altered by these changes and therefore did not adversely affect nuclear safety. This change did not result in changing any safety-related equipment but only properly reflecting the current as-built condition of the Primary Sampling System. There was no change in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the SAR. No different type of accident or malfunction was created by this change, subsequently the possibility for an accident or malfunction as previously evaluated in the FSAR was not changed. The margin of safety to any technical specification basis was not altered.

Document: FSAR Upgrade (PFU 98-T1-090)

Description of Change: This change was an editorial correction of numerous typographical errors, inaccuracies, and technically incorrect statements in Section 11.3.2.4, Table 11.3-1, and Appendix 11A.

Safety Evaluation Summary: The changes were minor, but will enhance the FSAR by correcting the errors. No safety related function was being altered by these changes and therefore will not adversely affect nuclear safety. This change did not result in changing any safety-related equipment but only properly reflects the current as-built condition of the Primary Sampling System. There will be no change in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the SAR. No different type of accident or malfunction was created by this change, subsequently the possibility for an accident or malfunction as previously evaluated in the FSAR was not changed. The margin of safety to any technical specification basis was not altered.

Document: FSAR Upgrade (PFU 98-T1-091)

Description of Change: This change added and deleted applicable documents from the list of references.

Safety Evaluation Summary: These editorial changes did not affect the licensing or design basis of any system as described in the SAR and were intended to be consistent in use of the reference section.

Document: FSAR Upgrade (PFU 98-T1-093)

Description of Change: These were editorial changes to add a new drawing, make corrections to correct typographical errors, and shift column entries to their proper location.

Safety Evaluation Summary: The changes were minor, but will enhance the FSAR by correcting the errors. No safety related function was being altered by these changes and therefore will not adversely affect nuclear safety. This change did not result in changing any safety-related equipment but only properly reflecting the current as-built condition of the Primary Sampling System. There was no change in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the SAR. No different type of accident or malfunction was created by this change, subsequently the possibility for an accident or malfunction as previously evaluated in the FSAR was not changed. The margin of safety to any technical specification basis was not altered.

Document: FSAR Upgrade (PFU 98-T1-094)

Description of Change: This change provided an exact list of components that the IC System cools and corrected language on the number of IC coolers in service.

Safety Evaluation Summary: The probability or the consequences of an accident or malfunction were not increased because operating with up to and including 2-IC coolers did not adversely impact safety because NR heat loads are not adversely affected. There was no possibility of a different type accident because NR heat loads are maintained. There was no change in the margin of any technical specification because the NR coolers remain operable with 2 IC coolers in service.

Document: FSAR Upgrade (PFU 98-T1-095)

Description of Change: This change was editorial, clarified the pump head of the Spent Fuel Pumps, and made other corrections.

Safety Evaluation Summary: No margins of safety of any technical specification were reduced because the Technical Specifications did not address the Spent Fuel Pumps.

Document: FSAR Upgrade (PFU 98-T1-136)

Description of Change: This was an editorial change to clarify language and correct inaccuracies with respect to system functions, operations, and equipment configurations in Section 9.8.1.

Safety Evaluation Summary: These changes were for clarification and accuracy only, and had no affect on safety.

Document: FSAR Upgrade (PFU 98-T1-137)

Description of Change: The purpose of this change was to correct errors in the system design description and make clarifications and corrections.

Safety Evaluation Summary: The changes were minor, but enhanced the FSAR by correcting the errors. No safety related function was being altered by these changes and therefore will not adversely affect

nuclear safety. This change did not result in changing any safety-related equipment but only properly reflected the current as-built condition of the Primary Sampling System. There will be no change in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the SAR. No different type of accident or malfunction was created by this change, subsequently the possibility for an accident or malfunction as previously evaluated in the FSAR was not changed. The margin of safety to any technical specification basis was not altered.

Document: FSAR Upgrade (PFU 98-T1-138)

Description of Change: This was an editorial change that corrects inaccuracies of referenced drawing numbers, adds references, and clarified how temperature detection devices work.

Safety Evaluation Summary: The changes were minor, but will enhance the FSAR by correcting the errors. No safety related function was being altered by these changes and therefore will not adversely affect nuclear safety. This change did not result in changing any safety-related equipment but only properly reflected the current as-built condition of the Primary Sampling System. There was no change in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the SAR. No different type of accident or malfunction was created by this change, subsequently the possibility for an accident or malfunction as previously evaluated in the FSAR was not changed. The margin of safety to any technical specification basis was not altered.

Document: FSAR Upgrade (PFU 98-T1-140)

Description of Change: The purpose of this change was to correct errors in the system design description and to clarify wording in Section 9.8.1 and 9.8.2.

Safety Evaluation Summary: The changes were minor, but enhanced the FSAR by correcting the errors. No safety related function was being altered by these changes and therefore will not adversely affect nuclear safety. This change did not result in changing any safety-related equipment but only properly reflected the current as-built condition of the Primary Sampling System. There was no change in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the SAR. No different type of accident or malfunction was created by this change, subsequently the possibility for an accident or malfunction as previously evaluated in the FSAR was not changed. The margin of safety to any technical specification basis was not altered.

Document: FSAR Upgrade (PFU 98-T1-134)

Description of Change: This change documented the reduction of the design basis minimum ambient temperature in the River Water Intake Structure from the current value in FSAR Table 9.8-1 of 60° F to a value of 40° F.

Safety Evaluation Summary: This change set the design basis value for minimum ambient temperature in the Intake Pump and Screenhouse at 40° F. This value is well below the minimum temperatures experienced in the building, and poses no operability threat to installed equipment. All equipment that is important for nuclear safety will continue to operate at temperatures above and including the minimum temperature. There was not an unreviewed safety question.

Document: FSAR Upgrade (PSU 98-T1-192), (SE-000510-001)

Description of Change: This was an editorial change to change references to two drawings from figure numbers, which were previously deleted from the FSAR, to the actual drawing numbers and to correct the title of one of the drawings.

Safety Evaluation Summary: The changes were minor, but enhanced the FSAR by correcting the errors. No safety related function was being altered by these changes and therefore will not adversely affect nuclear safety. This change did not result in changing any safety-related equipment but only properly reflecting the current as-built condition of the Primary Sampling System. There was no change in the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the SAR. No different type of accident or malfunction was created by this change, subsequently the possibility for an accident or malfunction as previously evaluated in the FSAR was not changed. The margin of safety to any technical specification basis was not altered.

Document: FSAR Upgrade (PSU 98-T1-165), (SE-000534-007)

Description of Change: This was an editorial change to delete the words, "from the Control Room" to clarify the meaning of Table 6.3-1.

Safety Evaluation Summary: The probability of occurrence or consequences of an accident or malfunction previously evaluated in the SAR was not increased because this evaluation makes no changes to the plant, nor did this document make changes to the design basis of the plant. The possibility for an accident or malfunction of a different type than evaluated in the SAR was not created because this document agrees with the design basis of the RR System. No unrecognized failure modes were introduced by this document.

Document: FSAR Upgrade (PFU 98-T1-158, PFU 98-T1-159)

Description of Change: This change was editorial to update descriptions in Chapter 1 and 3 that have been changed in other parts of the FSAR. Also several editorial corrections were made.

Safety Evaluation Summary: The changes to Chapters 1 and 3 were descriptive or corrected editorial errors. The changes did not raise any safety issues and, therefore, were not adverse to safety and did not create any unreviewed safety questions. They did not require any Technical Specification changes. Therefore, these changes are acceptable as changes under 10 CFR 50.59 guidelines.

Procedure: 1410-Y-71 Structural Steel and Metal Deck Fire Proofing Repairs (PCR 1-MT-98-4524, TCN 1-98-0118)

Description of Change: The procedure was revised to reflect the change in the fire barrier patching material from Cafco Blaze Shield D C/F, which is no longer made, to a new replacement material.

Safety Evaluation Summary: The safety evaluation performed to review the change concluded that the change to a new fire barrier patching material did not reduce the rating of the newly patched or existing fire barriers. Since there was no change in the rating or thickness of the new fire barrier material, no accidents became more probable due to application of this fire barrier patch. There were no Technical Specifications associated with this material.

Procedure: OP 1102-12, Hydrogen Addition and Degassification (1-OS-98-0581)

Description of Change: This procedure was revised as a result of Licensee Event Report 98-09 that identified a deficiency in the Make-Up Tank operating limits. Section 3.4.1, "Hydrogen Degassification" was revised for more general use for Make-Up Tank venting. The description of the alternate means for hydrogen degassification prior to plant shutdown was revised. Also more specific direction for how to replace the Make-Up Tank hydrogen with nitrogen was added.

Safety Evaluation Summary: The safety evaluation performed to review the change concluded that the revised Make-Up Tank operating limits and procedures or actions taken in response to specific Make-Up System failures did not affect the probability of occurrence of an accident. A failure of the Make-Up system is not an accident as described in the SAR. The addition of nitrogen to the RDS did not increase the probability of failure of the fuel cladding or RCS pressure boundary. Therefore, this activity did not increase the probability of occurrence of an accident previously evaluated in the SAR.

Procedure: OP 1104-2, Make Up and Purification (1-OS-98-0571)

Description of Change: The procedure was revised to add new Make-Up Tank pressure and level limits, add a new steady state operating band, revise limit curves to prevent gas entrainment and ensure pump NPSH, and revise the alarms.

Safety Evaluation Summary: The safety evaluation performed to review the change concluded that the revised Make-Up Tank operating limits and procedures or actions taken in response to specific Make-Up System failures did not affect the probability of occurrence of an accident. A failure of the Make-Up system is not an accident as described in the SAR. The addition of nitrogen to the RDS does not increase the probability of failure of the fuel cladding or RCS pressure boundary. Therefore, this activity will not increase the probability of occurrence of an accident previously evaluated in the SAR.

Procedure: ATP 1210-8, RCS Superheated (1-OS-98-0510)

Description of Change: The procedure was revised to include a transition to the TMI plant specific Severe Accident Management Guidelines. Additionally, the actions remaining in ATP 1210-8 were modified as required. The changes were based upon the B&W Owners' Group Technical Bases Documents, which provide the bases for the Abnormal Transient Procedures. The specific changes to the Technical Bases Documents are related to implementation of the Severe Accident Mitigation Guidelines. The primary change was the addition of a transfer to the Severe Accident Mitigation Guidelines once the predicted clad temperature exceeds 1800° F.

Safety Evaluation Summary: The safety evaluation performed to review the change concluded that the proposed changes will not increase the probability of occurrence of an accident previously evaluated in the SAR nor an accident of a different type than any previously evaluated in the SAR. There are no hardware changes related to this change. The changes will not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the SAR. Also that the proposed changes will not reduce the margin to safety as defined in the basis for any Technical Specification.

Procedure: SP 1301-1, Shift Daily Checks (PCR 1-OS-98-0421)

Description of Change: This Procedure Change Request provides instructions to Control Room personnel for steps to be taken if condenser off-gas flow is out of service. The Condenser off-gas flow is an important parameter for evaluation of primary to secondary leak rate, and is used in evaluating releases to the environment from the condenser.

Safety Evaluation Summary: A safety evaluation concluded that the conservatively high condenser off-gas flow rate proposed by the change as a compensatory action in response to instances where the plant's instrumentation is out of service would result in a safer plant. The possibility for an accident or malfunction of a different type than evaluated in the SAR is not created because this document agrees with the design basis of the System. No unrecognized failure modes are introduced by this document.

Procedure: AP 1038, Administrative Controls – Fire Protection Program (PCR 1-EG-98-0013)

Description of Change: These changes to the procedure describe the new IFD fire detection system that was installed as a result of modification MD-D542 and add operating and PM procedures to ensure the fire protection program requirements for the new systems will be maintained. These modifications were intended to increase the plant operators' ability to detect and respond to any fire in the Control Building.

Safety Evaluation Summary: A safety evaluation concluded that these changes have no affect on plant safety, that they do not conflict with any Technical Specification or other license requirements or regulations, and do not affect any margin of safety associated with them.

Procedure: OP 1107-1, Normal Electrical System (TCN 1-98-0119)

Description of Change: This change was proposed to reflect the result of calculations that showed the potential of degraded grid voltage under certain conditions. A new minimum voltage of 232.4kV is specified to accomplish a single transformer transfer. The ES bus monitoring limit is raised to 424 volts and a Technical Specification reference was added. Also manual action is specified for responding to a low voltage condition as identified by alarms.

Safety Evaluation Summary: The safety evaluation concluded that the revision did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Procedure: AP 1203-41, Low System (Grid) Voltage (TCN 1-98-0114)

Description of Change: This TCN was issued to prevent the potential for both ES buses to transfer to the Emergency Diesel Generator on loss of 1 transformer. Manual corrective actions are specified.

Safety Evaluation Summary: A safety evaluation concluded that this procedure change uses manual action to respond to a low voltage condition as identified by alarms and was not considered an unreviewed safety question since manual action in response to a low voltage alarm was acknowledged in the NRC SER for Technical Specification amendment 159. The safety evaluation also concluded that the procedure did not involve an increase in the probability or consequences of an accident or malfunction of

equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: SP 1302-5.4, Reactor Coolant Flux Flow Comparator (TCN 1-98-0105, TCN 1-98-0076)

Description of Change: The purpose of this temporary procedure was to allow for calibration to be performed operating with RPS channel "C" in manual bypass and to allow RC system pressure to be used to check transmitter static pressure zero drift.

Safety Evaluation Summary: A safety evaluation concluded that implementation of this TCN does not involve the probability of an unreviewed safety question and does not adversely affect nuclear safety or safe plant operation.

Procedure: SP 1301-1, Shift and Daily Checks (TCN 1-98-0091)

Description of Change: The purpose of this change was to provide an alternate means to conduct shift and daily checks while VA-F1-1113 is out of service and not available for primary-secondary leak-rate tests.

Safety Evaluation Summary: The safety evaluation concluded that the procedure did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: ATP 1210-2, Loss of 25° F Subcooled Margin (PCR 1-OS-98-0334)

Description of Change: The purpose of this change was to make changes to the operation of the Reactor Building Emergency Cooling Water (RR) water system in the Abnormal Transient Procedures as per recommendations of the B&W Owners Group.

Safety Evaluation Summary: The safety evaluation concluded that the proposed change to the ATP's did not require a change to the Technical Specifications. And operation of the RCP's during an event was not addressed in the Technical Specifications. Further, the change to the ATP's did not adversely affect nuclear safety or safe plant operation. Also, it did not involve the probability of an unreviewed safety question. Therefore, the plant can implement the ATP changes without prior review and approval from the NRC.

Procedure: ATP 1210-3, Excessive Primary to Secondary Heat Transfer (PCR 1-OS-98-0335)

Description of Change: This procedure was changed to implement recommendations of the B&W Owners Group for Abnormal Transient Procedures. This change was mainly the deletion of RC-Pump bump criteria and change in criteria for starting a RC-Pump following the loss of subcooling margin due to possibility of pushing a slug of deborated water from the OTSGs into the reactor core and potentially having the reactor go critical and to revise Reactor River operating limitations based on revised EQ calculation C-1101-823-5450-001.

Safety Evaluation Summary: A safety evaluation concluded that these changes incorporate guidance from the B&W Operations Support Committee, which will eliminate the possibility of a deborated water reactivity excursion if a RC pump is started following a loss of subcooled margin. All of the changes served to aid the operator in placing the plant in a safe and stable condition following a transient. Therefore these changes did not have the potential to adversely affect nuclear safety or safe plant operations. Further, the change to the ATP's did not adversely affect nuclear safety or safe plant operation. Also, it did not involve an unreviewed safety question. Therefore, the plant can implement the ATP changes without prior review and approval from the NRC.

Procedure: ATP 1210-4, Lack of Primary to Secondary Heat Transfer (PCR 1-OS-98-0336)

Description of Change: This procedure was changed to implement recommendations of the B&W Owners Group for Abnormal Transient Procedures. This change involved deletion of RC-Pump bump criteria and change in criteria for starting a RC-pump following the loss of subcooling margin due to possibility of pushing a slug of deborated water from the OTSGs into the reactor core and potentially having the reactor go critical and revising Reactor River operating limitations based on revised EQ calculation C-1101-823-5450-001.

Safety Evaluation Summary: The safety evaluation concluded that the procedure did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: ATP 1210-6, Small Break LOCA Cooldown (PCR 1-OS-98-0338)

Description of Change: The procedure was changed to remove RCP bumps because of the concern for pushing a slug of deborated water through the core. Also a new step was added to promote primary-to-secondary heat transfer. A condition was added to opening the high point bent valve action to be consistent with the Technical Bases Document, which does not open the high point vents if SCM does not exist.

Safety Evaluation Summary: The safety evaluation concluded that the procedure did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: ATP 1210-7, Large Break LOCA Cooldown (PCR 1-OS-98-0339)

Description of Change: This procedure was changed to reflect that Reactor River water system requirements changed when the EQ analysis was re-performed with lower RR system flow to the fan coolers.

Safety Evaluation Summary: The safety evaluation concluded that the procedure did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did

not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: ATP 1210-10, Abnormal Transients rules, Guides and Graphs (PCR 1-OS-98-0342)

Description of Change: This procedure was changed to account for the potential prompt criticality that could occur if the RCPs are restarted following a loss of SCM, which could setup a condition that deborates the vessel downcomer and/or the OTSG outlet and cold legs. Also a note for bumps was removed because of the concern for pushing a slug of deborated water through the core.

Safety Evaluation Summary: The safety evaluation concluded that the ATP did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: SP 1302-5.17, Makeup Tank Level + Pressure Instrumentation (TCN 1-98-0070)

Description of Change: This temporary procedure change increased the allowable tolerance for the makeup tank pressure sensor MU17-PT. These procedure changes were necessary because the MU17-PT instrument was not capable of meeting the requirements imposed by the procedure.

Safety Evaluation Summary: A safety evaluation concluded that safe plant operations were not affected by this change. No structures, systems, or components were changed as a result of this calibration tolerance allowance. Makeup Tank pressure assumption was within the requirements of the analysis because the tolerance was within the requirements of the error calculation, and pressure was maintained within the requirements of the operating procedure. The safety evaluation concluded that the procedure did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: EP 1202-32, Flood (TCN 1-98-0072)

Description of Change: This change added the ESPH to the list of floor drains to check for proper operation. The FSAR Section 2-6.a provides that the ISPH is equipped with floor drain check valves for achieving and maintaining a safe shutdown condition. These check valves are provided for flood protection from the lower level of the pump bays to the operating floors. The change directed operators to verify that the valves were intact and operating properly under potential floor conditions. It also directed that if the valves are not functioning properly to install inflatable plugs.

Safety Evaluation Summary: A safety evaluation concluded that implementation of this change would enhance nuclear safety and overall safe plant operation by verifying that installed flood protection equipment was functioning properly and if not, by implementing appropriate compensatory actions.

Procedure: PM IC-48, RMA-2 Paper Drive Cleaning and Filter Replacement (PCR 1-MT-98-3008)

Description of Change: The procedure was changed to stop RMA-2 Vacuum Pump before discharge valves CM-V1/V2 are closed to prevent rupturing the discharge filter gasket.

Safety Evaluation Summary: The safety evaluation concluded that the change did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: CM 1430-RMS-10, Particulate Sampler Maintenance (PCR 1-MT-98-6512)

Description of Change: This procedure was changed to stop RM-A2 vacuum pump before discharge valves CM-V1 and CM-V2 are closed to prevent rupturing the discharge filter gasket.

Safety Evaluation Summary: The safety evaluation concluded that stopping the pump before CM-V1 and/or CM-V2 are closed ensured the integrity of the pump filter gasket, thereby enhancing plant safety by preventing the potential for an unmonitored release to the Intermediate Building. The change did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: EP 1202-37, Cooldown from Outside of the Control Room (PCR 1-OS-98—0270)

Description of Change: This procedure was changed to correct conditions identified by plant operations and probabilistic risk assessment, which could cause a total loss of High Pressure Injection due to a single failure. The new power supply configuration will ensure that MU-P-1b always has an energized lube oil pump to support operation.

Safety Evaluation Summary: The safety evaluation concluded that the change did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: SP 1302-3.1, RMS Calibration (PCR 1-98-8512)

Description of Change: This procedure is being changed as a result of a biennial review. The test using a ¹³⁷Cs source is being deleted; a step that is used to determine the expected source reading when doing an iodine channel is being deleted; the column containing the MTX page numbers for each channel was deleted; the section of Table 3 that contained the iodine channel gross count information was deleted; minor editorial changes were being made; and wording of certain steps were changed for working on RM-A-2 to prevent damage to the pump filter gasket.

Safety Evaluation Summary: The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety

previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: AP 1038, Administrative Controls – Fire Protection Program (PCR 1-EG-98-0006)

Description of Change: This procedure was changed to revise start time on fire watch log and provide Shift Supervisor sign-off for initiating and termination of fire watch. Also made the form “typical” to allow for deviations or changes and support administrative needs.

Safety Evaluation Summary: The safety evaluation concluded that the change did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: OP 1104-29F, Miscellaneous Radioactive Hot Spot Flushes (PCR 1-OS-98-0269)

Description of Change: The purpose of this change was to introduce several flushes into the procedure to remove radiological hot spots to an area where they would not contribute to the general dose of the work force.

Safety Evaluation Summary: A safety evaluation showed that the flushes for the most part use installed equipment, when required suitable hoses and fittings are used. In some instances demineralized water was used for the flushes. When employed its use was restricted to limit the impact on plant operations. Each of these flushes was previously successfully completed by a TCN or a STP, which were reviewed and approved. The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: SP 1302-5.17, Make-Up Tank Pressure and Level Instrumentation (PCR 1-MT-98-8538)

Description of Change: The procedure was changed to revise the head correction based on field measurements, establish as-found and as-left tolerances that support the overall loop accuracy requirements of MU tank pressure and level limits analysis, and revised as-left tolerance on PPC indicator for MU tank pressure.

Safety Evaluation Summary: The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: SP 1302-5.1, Reactor Coolant Temperature Channels
SP 1303-11.39A, HSPS – EFW Auto Initiation (TCN 1-98-0001)

SP 1303-11.39A, HSPS – EFW Auto Initiation (TCN 1-98-0169)
SP 1303-4.1B, RPS Channel B Test (TCN 1-98-0010)
SP 1303-4.1D, RPS Channel D Test (TCN 1-98-0006)
SP 1303-4.1D, RPS Channel D Test (TCN 1-98-8529)

Description of Change: The purpose of these changes was to allow the procedure to be performed with the RPC Channel C in Manual Bypass because there was the possibility of a spurious trip. It deleted the requirements to place RPS Channels A, B, and D in Manual Bypass and removed them from Manual Bypass after calibration was complete. It verifies applicable RPS Channels operable before beginning calibration, provided logging instructions for shift foreman when performing calibrations, recognized that RPS Channel C was in Manual Bypass and left it in Manual Bypass at the completion of Channel C calibration. It placed RPS Channels A, B, and D temperature test module in Test Operate, Tripping the channel, when performing calibrations for those channels. It returned RPS Channels A, B, and D temperature test module to Operate, when calibrations were complete for those channels.

Safety Evaluation Summary: The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: OP 1104-24B, Intake Screen House and Pump Vent (PCR 1-OS-98-0237)

Description of Change: This change deletes SW-FI-1133 because it has no purpose.

Safety Evaluation Summary: The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: OP 1104-8, Intermediate Cooling System (PCR 1-OS-98-0152)

Description of Change: This change added a 15th Limit and Precaution calling for notification of the engineer if full system flow must go through either IC cooler because of vibration.

Safety Evaluation Summary: The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: SP 1301-4.4, Borated Water Storage Tank (TCN 1-98-0002)

Description of Change: This temporary change allowed the BWST to be sampled via DH-V-1107.

Safety Evaluation Summary: The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety

previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: OP 1107-3, Diesel Generator (TCN 1-98-0021)

Description of Change: This temporary change provides guidance for overspeed trip testing of EG-Y-1 A/B during and prior to annual maintenance. The temporary change will no longer be valid after completion of the annual maintenance on EG-Y-1 A/B.

Safety Evaluation Summary: The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: SP 1303-1.1, Reactor Coolant System Leak Rate (PCR 1-OS-98-0070)

Description of Change: This procedure change set the baseline OTSG leakage for Cycle 12 at zero and made several small editorial corrections to the procedure.

Safety Evaluation Summary: The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: AP 1203-15, Loss of RC Makeup/Seal Injection (PCR 1-OS-98-0042)

Description of Change: This change added a relatively short amount of time to that required to restore RC Makeup and RC Pump seal injection flow following a failure of the operating Makeup Pump.

Safety Evaluation Summary: The amount of time added for the extra verification step is negligible. The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

Procedure: 1420-RC-2, RC-V-4 Temporary Electrical Connections Following LOCA and Loss of 1C-ESV MCC (PCR 1-MT-97-5520)

Description of Change: This revision performed the connection work at the reactor building penetrations. This procedure performed the work away from the penetrations in areas with lower dose levels. Also the tagging and labeling of control and indications for both valves was described in greater detail.

Safety Evaluation Summary: The safety evaluation concluded that the changes did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification.

III. Modifications

For each of the modifications made to TMI-1 as identified below, a Safety Evaluation was performed and the results of the evaluation found based on the description above, that the probability of occurrence or consequences of an accident or malfunction either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question resulted.

Modification: Restored the Pipe Supports on the River Water Pump Strainer Differential Pressure Switches EER-00152588 (SE 000104-004)

Description of Modification: Corrosion of the existing stanchions, base plates and anchor bolts supporting the river water pump strainer differential pressure (ΔP) switches necessitated the repair/rebuilding of the supports. The ΔP switches control the strainer backwash valves. The strainer ΔP switches, tubing, and valves were temporarily supported to meet dead weight and seismic concerns until completion of the repair/rebuild activities. The repaired/rebuilt strainer ΔP supports perform their intended function by maintaining the integrity of the safety related equipment during normal plant operations and during or after a design basis event.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Removal of Main Steam Safety Valve Audio Monitor (SE 000411-009)

Description of Modification: The modification removed hardware for the Main Steam Safety Valve (MSSV) Audio Monitor, which was installed to provide indication of MSSV position. MSSV position monitoring is available via secondary plant parameters (OTSG levels and pressures) and visual observation of the valve discharge stacks.

Safety Evaluation Summary: An evaluation of the modification found that removal of the MSSV monitoring system had no interface (not used to control or determine the condition) with any safety related equipment and is not necessary to mitigate the consequences of an accident. Operators will respond to the activity of the steam generator in to control primary system cooling. Plant operators verify MSSV lift and closure after a transient.

Modification: NI-7 Detector and Cable Replacement (SE 000623-002)

Description of Modification: The modification replaced the failed NI-7 power range detector with a spare detector of the same model. Connectors were installed on each end of new cables pulled (RG94A, RG95A and RG97A) from the penetration to the detector. The modification restored operation of the NI-7 power range instrumentation as originally designed.

Safety Evaluation Summary: The modification did not affect the safety function i.e. the ability to provide the reactor protective system with a measure of reactor neutron power for reactor trips and permissives for anticipatory trips. The replacement detector is the same model as the original and the cable type and connectors were also like kind replacements. No safety features or requirements were changed as a result of the modification.

Modification: Emergency Diesel Generator Engineered Safeguards Actuation System Test Modification (SE 000741-004)

Description of Modification: The modification to the Emergency Diesel Generator (EDG) moved the point of testing overlap from the air start valve solenoids back to the 4A/4B relays. Test switches allow individual testing of the start relays while enhancing the capability of the EDG to respond to a start demand from a valid engineered safeguards or undervoltage condition. As a result of the modification, the start signal was blocked from energizing the relays by the test switch during the performance of test surveillance 1303-5.2.

Although the circuit modification introduces the possibility that the EDG could be rendered inoperable due to improper test switch positioning, the possibility has been minimized by the use of key lock switches, incorporation of human factors considerations and procedural controls equivalent to that used for all other critical safeguard components.

Safe Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Threaded Holes for Once Through Steam Generator Handhole Backing Plates CCR 94-065 (SE 113202-593)

Description of Modification: Modification of the Once Through Steam Generator (OTSG) handhole backing plates consisted of installation of two small threaded holes in the backing plate to assist in the handling of the plates. Following the modification, sufficient thickness at the handhole backing plates remained such that the primary system pressure boundary retained sufficient thickness to withstand the stresses imposed by the primary system's maximum design pressure with considerable margin.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and

did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Spent Fuel Pool Diver Platform CCR 138384 (SE 113202-726)

Description of Modification: The configuration change installed a movable platform spanning over the spent fuel pool and onto the spent fuel handling bridge rails at the 348 ft. elevation of the Fuel Handling Building. The purpose of the platform is to make dive locations as close as possible to the work area. Use of the platform was considered to reduce the potential health and safety hazards to divers and improve diving operating efficiency.

The modification did not affect the function of structures, components, or systems. The platform was designed to withstand seismic loads and will not fall on any safety-related equipment during use for diving operations or relocation: relocation of the platform is in accordance with the guidance of NUREG-0612.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Pre-Fabrication Outage Building Sprinkler System CCR 122222 (SE 113202-740)

Description of Modification: The modification extended the existing fire service protection to the 322' elevation of the turbine building and to the Pre-Fabrication Outage Building which did not previously have dedicated protection. To accommodate one phase of construction, the fire service sprinklers to a portion of the turbine building were isolated. Alternate fire control strategies were in effect during this period.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Decay Heat Removal System Piping Permanent Shielding MD H111-001 (SE 113202-755)

Description of Modification: The modification made permanent three previously installed temporary lead shielding additions installed on valves DH-V-12A and DH-V-12B and on the 12" pipe between DH-V-3 and DH-V-12B to provide a significant general reduction to the plant radiation dose rates. The installation was evaluated to Safe Shutdown Earthquake criteria and found acceptable.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously

evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: River Water Level Indication CCR 136541 (SE 113202-786)

Description of Modification: The modification installed an air bubbler type level indicator on the north wall of the pump room in the Intake Screen House. The purpose of the indicator is to provide accurate river water level indication during periodic in-service testing of the river water pumps and river level information to the control room during flood emergencies. Air to operate the indicator during the infrequent river level readings is supplied from the service air header in the Intake Screen House.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: EG-P-004A and EG-P-004B Main Lube Oil Pump Discharge Pipe Modification MD-H006-001 (SE 113202-813)

Description of Modification: The Main Lube Oil Pump discharge piping was found to be constructed with partial penetration welds. The first piping section from the pumps to the Dresser coupling was replaced with A106 Grade B piping fabricated using full penetration welds. The design change only involved the design configuration and replacement of the mitered joint elbows with 45-degree long radius elbows.

The modification to new piping material and full penetration welds resulted in higher allowable Code stress and reduces the stress intensification factor at the welds. The redesigned piping met system design requirements for the system design pressure and temperature.

Safety Evaluation Summary: The modification met system design requirements for pressure and temperature. Modification of the welds to full penetration welds decreases pipe stresses by reducing the stress intensification factor at the previous welds. The diesel seismic classification remains Seismic Class I. The possibility of pipe failure is unchanged because the number of attachment points of pipe to diesel was unchanged. The diesel remains operationally unchanged and its ability to perform its safety function is unchallenged by the modification.

Modification: Station Static Inverter 15kVA CVT Replacement (SE 113202-779)

Description of Modification: The purpose of the modification was to provide instructions for replacement of the 15kVA Constant Voltage Transformer (CVT) for any station static inverter, with a replacement transformer kit. Original General Electric transformers are no longer available and replacements are made with Solidstate Controls transformers. The modification also directs that sound isolation pads be installed below transformers and chokes to dampen transformer induced vibration.

Safety Evaluation Summary: The replacement transformer units improve system reliability and simplify circuitry design while reducing heat generation. Voltage generation, load carrying capacity, harmonic distortion, overload capacity, and failure mode are consistent with the GE units replaced. The seismic stability of the replacement transformers was evaluated by GPU Nuclear and concluded that the modification including use of the sound isolation pads was safe.

Modification: Instrument Air Compressor 2A &2B Discharge Isolation Valves (SE 410202-801)

Description of Modification: The modification installed discharge isolation valves on the 2A and 2B Instrument Air Compressors. The purpose of the valves is to allow the isolation of the air compressor and its discharge control valve for maintenance without requiring an extensive change to the system valve line-up.

Safety Evaluation Summary: System operation and performance characteristics were not significantly changed by the modification: the valve caused a slight increase in system flow resistance. The section of the system involved in the modification is associated with the backup air supply used in the event of a failure of the main compressors. The modification did not affect safety-related parts of the system and did not involve a seismically qualified section of the system.

Modification: Emergency Diesel Generator Air Screen Modification (SE 113202-815)

Description of Modification: A section of the 'A' Emergency Diesel Generator (EDG) radiator fan air intake trash screen was penetrated by tubing and a support which prevented removal of that screen section. The screen section was modified eliminate the interference from the tubing and support to allow its removal. The portion of wire screen removed by this modification did not affect the ability of the screen to remain affixed in place or its structural integrity.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Reconfiguration of River Pump Lube Water Manifolds (SE 113202-816)

Description of Modification: The purpose of the modification was to reduce or eliminate the potential for lube water manifold damage or leakage that would result in spraying water onto nearby nuclear safety related electrical equipment. The configuration, component design rating, and installation guidance provided assurance of pressure boundary integrity.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Decay River Valves 1A and 1B Motor Replacement (SE 113202-824)

Description of Modification: Motors with higher torque replaced the previously existing motor operators on DR-V-1A and 1B. The action was taken based on the results of butterfly valve torque and setpoint calculation determined the desirability of additional torque margin during design basis events. As a result, the capability of the valves to perform their safety function by maintaining the motor operated valve control scheme was improved while providing additional torque margin for safety function completion.

The calculation forms the basis and provides confidence that the valves will perform their safety function in a realistic manner. The modification took into effect both conservative design parameters and actual diagnostic test data.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: 'A' Incore Vault Cover Permanent Shielding (SE 113202-836)

Description of Modification: The modification made permanent the previously installed temporary lead shielding on the 'A' Incore Storage Vault Cover to reduce the area radiation dose. The installation was evaluated to Safe Shutdown Earthquake criteria and found acceptable.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Mini Valve Alley Makeup System Piping Permanent Shielding (SE 113202-843)

Description of Modification: The modification made permanent three previously installed temporary lead shielding additions installed on the Makeup system piping in the mini valve alley to reduce the area radiation dose. The installation was evaluated to Safe Shutdown Earthquake criteria and found acceptable.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Intake Pump House Conduit Support Replacement (SE 113202-845)

Description of Modification: The modification replaced the previously existing corroded conduit supports (stanchions, base plates, anchor bolts and support bottoms) located in the Intake Screen House.

Safety Evaluation Summary: The modification only allowed for the repair and replacement as originally designed. The replacement supports perform the same function as those replaced and leave the system operationally unchanged. The possibility of support failure remains unchanged due to the number of supports and their attachment points remains as before.

Modification: Spent Fuel Cooling System Valve V-19 Permanent Shielding (SE 113202-846)

Description of Modification: The modification made permanent the previously installed temporary lead shielding installed on valve SF-V-19 to reduce the area radiation dose. The installation was evaluated to Safe Shutdown Earthquake criteria and found acceptable.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Building Spray Valve 60A Bonnet Permanent Shielding (SE 113202-847)

Description of Modification: The modification made permanent the previously installed temporary lead shielding on the bonnet of BS-V-60A to reduce the area radiation dose. There was no affect on system performance since the shielding is independent of the valve and Building Spray system and was evaluated to Safe Shutdown Earthquake criteria and found acceptable.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Spent Fuel Overhead Pipe Permanent Shielding (SE 113202-848)

Description of Modification: The modification made permanent the previously installed temporary lead shielding on the Spent Fuel cooling system overhead piping to reduce the area radiation dose. There is no affect on system performance since the shielding is independent of the Spent Fuel cooling system and was evaluated to Safe Shutdown Earthquake criteria and found acceptable.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the

possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Reactor Building Operating Floor Fan AH-E-3A/3B Seismic Restraints (SE 113202-863)

Description of Modification: The subject fans were modified by incorporation of lateral restraints to prevent potential interfere with the function or damage proximate safety related structures, systems and/or components during a safe shutdown earthquake (SSE) event.

Safety Evaluation Summary: The seismic restraints were designed to minimize fan movement during a SSE and thus reduce the possibility of adverse affects on nearby safety-related structures, systems, and components. Specific protection afforded the reactor containment liner limits the potential for puncture by movement of these fans and potential for the release of radioactive mater to the environment.

Modification: Nuclear Services River Water Pump 1A, 1B and 1C Tube Stabilizer Installation (SE 113202-868)

Description of Modification: The modification installed a rubber stabilizer in the columns of the three Nuclear Services River Water Pumps 1A, 1B, and 1C. The use of stabilizers was recommended by the component vendor and is expected to enhance the long-term reliability and service life of the pumps by eliminating damaging stresses on the lube tubes that enclose the shafts and support the intermediate line shaft bearings.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Decay Heat System Cross-Connect Vents MD H227-001 (SE 113202-883)

Description of Modification: The modification installed high point vent valves DH-V-168 and DH-V-169 on the cross-connects of the Decay Heat (DH) system. The system vents allow convenient, effective and safe venting of trapped air from the DH system high points when returning the system to service following maintenance as well as speed system drain down. Included in the modification was the installation of a gooseneck on DH-V-164, on the "piggyback" line to prevent system fluid spillage when removing temporary drain tubing following the completion of venting operations.

The modification involved the installation of passive system components, which meet the design, and seismic requirements of the DH system. The total system leakage limits were not increased possibility nor was the possibility of a leak. The consequence of failure for the new vents is not different than the failure of previously evaluated components in the DH drop line piping or DH system discharge cross connect line. The modification improved the operability of the DH system without adversely affecting other systems or components.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Decay Heat and Decay Heat Closed Cooling System Relief Valve Replacement (SE 113202-887)

Description of Modification: The modification replaced the Lonergan relief valves that had a history of failure and had been difficult to maintain. The Lonergan valves could only be replaced during Technical Specification system outage windows. DH-V-18A was replaced with a Crosby Omni-Trim Series 900 soft seat relief valve and DC-V-15A & B, DC-V-17A & B and DC-V-18A & B were replaced with Anderson Greenwood Series 81P soft seat relief valves.

The pressure setpoint of the replacement relief valves was set at that of the valve it replaced. The replacement valves were sized larger than the original design criteria to assure the availability of adequate system relief capacity. Materials used in the construction of the replacement valves are compatible with existing materials and the expected post accident environment. The replacement valves and piping were seismically qualified and comply with line list specifications.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Makeup Pump Oil Leakage Elimination (SE 113202-892)

Description of Modification: Makeup pumps 1A/1B/1C were modified by reconfiguring the oil lubrication and oil fill provisions for the purpose of reducing or eliminating the potential for pipe joint leakage and oil spillage. Stainless steel and carbon steel piping with threaded and compression fittings replaced the previously existing copper piping with threaded and soldered joint designs. Flexible hoses were added to eliminate stress on joints as necessary.

Safety Evaluation Summary: The modification provides improved leak tightness and cleanliness to the makeup pump lubrication systems. There was no adverse affect on the performance or function of the pumps. The probability of fire was minimized by the reduction of the potential for oil leakage or spillage as a result of the modification. No common mode failure conditions were introduced by the modification.

Modification: Replacement of RR-V-11A, 11B and 11C (SE 113202-896)

Description of Modification: The modification replaced the difficult to maintain and decreasingly reliable Reactor Building Emergency Cooling Water Lonergan relief valves with Crosby Omni-Trim Series 900 relief valves with a recently designed, more dependable and leak resistant soft seat.

Safety Evaluation Summary: The replacement valves were sized larger than the originals to assure that the system has adequate relief capacity if it is required. Revised relief setpoints are justified by the increased capacity as identified in GPUN calculations C-1101-900-E410-039 and C-1101-900-E410-044. Valve construction materials are compatible with existing materials and the expected post accident environment. The seismic capability of the system was not degraded by the replacement of the valves.

Modification: 1A / 1B Battery Charger and 1C /1D inverter Breaker Swap (SE 113202-903)

Description of Modification: The modification swapped the breaker locations which provide power to the 1C Inverter with the breaker that provides power to the 1A Battery Charger and swap the 1D Inverter breaker with the 1B Battery Charger breaker. Swapping the breakers placed the supplies for the 1A, 1C, 1B and 1D Inverter and Battery Charger in the same motor control center and made performance of surveillance easier since only the A, B, C or D Inverters and Battery Chargers will have to be de-energized rather than the combination of A and C or B and D.

Safety Evaluation Summary: The modification had no affect on the Battery Chargers or Inverters. The same components were reused, set at the same settings, and powered by the same load centers. The total loads did not result in a change on the 1A and 1B Engineered Safeguards 480V control centers. No margin of safety was affected for the components or equipment modified.

Modification: Main Inverter DC Ammeter and Frequency Meter Replacement (SE 113202-904)

Description of Modification: The modification replaced the obsolete and increasingly unreliable analog DC ammeter and frequency meter on each of the Main Inverters with state-of-the-art digital meters.

Safety Evaluation Summary: The replacement digital meters provide the same information about the output frequency of the inverters and the current of the battery as the original meters. The devices have no control functions. The meters are electrically isolated from the other inverter electrical components by qualified fuses. They were also installed as Seismic II anti-falldown so as not to impact any other components during a seismic event. There is no Technical Specification margin of safety associated with the meters.

Modification: Removal of Feedwater Heater Drain Valve HD-V-006 (SE 113202-908)

Description of Modification: The modification removed Heater Drain valve HD-V-006 thereby separating permanently the Heater Drain and Auxiliary Steam systems at the valve's location. The pipe ends were capped.

Safety Evaluation Summary: The system interconnection was originally provided to increase efficiency through the use of the heater drains supplying suction to the auxiliary steam system. Plant operation was unchanged by the modification since the capability to take suction on the eighth stage heater shell was not utilized. The modification did not involve any safety systems.

Modification: Engineered Safeguards Trip of the Non- Engineered Safeguards Nuclear Services River Pump (SE 113202-914)

Description of Modification: The modification reconfigured the Nuclear Service River Water (NR) auto start and trip logic to trip/block auto start of the non- Engineered Safeguards (ES) selected NR pump on an ES signal. This was accomplished using the existing spare relay contacts from ESAX (ESBX) relays being energized by an HPI ES contact actuated on 1600/500 psig low RCS pressure and 4 psig RB pressure ES signals. Spare normally closed contacts were connected in series with the 27/86 contact in the auto start circuit and spare normally open contacts were connected in parallel with the 27/86 contact in the pump trip circuit.

Safety Evaluation Summary: The modification reduced the need to take manual action to maintain adequate voltage to NSR loads under degraded grid conditions and large break LOCA while assuring adequate voltage margin for the replacement Decay Heat River pumps under degraded grid critical voltage conditions. NR system functions as described in the UFSAR were not changed. Tripping the non-ES selected NR pump on a non-ES signal provides additional voltage margin for the NSR components powered from the 1R and 1T 480V ESSH buses. The standby NR pump is still available to start if the operating NR pump trips.

Modification: Health Physics Control Point Reconfiguration (SE 120060-001)

Description of Modification: The modification made changes to the physical configuration of the Health Physics Control Point to correct identified weaknesses in the TMI Radiological Control Program regarding the release of material from radiological controlled areas. The expected results are increased sensitivity of monitoring equipment due to its relocation to lower background areas and a more effective interface between the Radiological Controls technicians and radiation workers,

The architectural reconfiguration of the affected area of the Control Building (CB) had no affect on load bearing walls or structures. Metal covered BX and MC cable was used for low voltage lighting and receptacle circuits since these are not Class 1E applications. Modification of a HVAC supply duct and fire service sprinkler piping down-comer to accommodate the new dropped ceiling arrangement had no adverse affect on either the CB Heating and Ventilation System or the Fire Protection Service Water System.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Disconnection of Cleanco Building Services (SE 410032-001)

Description of Modification: The modification disconnected services (reclaimed water, service air, Auxiliary Building ventilation, AC power and page phones), removed its internal equipment and eliminated the Cleanco building. The opening in the GAPGUN building that remained after removal of the Cleanco building was closed off with a roll-up door. The decontamination equipment and the Cleanco building that housed it were obsolete and not required to safely operate TMI-1.

Disconnection of the support services eliminated loads on the associated systems and increased the capacity of those systems.

Safety Evaluation Summary: An evaluation showed that modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Decay River 1A/1B Replacement and Orifice Assembly 1303A/B Installation (SE 410062-001)

Description of Modification: The modification was performed to provide the recommended pressure to the down stream strainers (DR-S-1A/1B) for effective back washing. The new pumps are capable of developing higher head, and the flow limiting/flow measurement orifices reduce the delivered flow rate. The orifices also reduce the potential for cavitation on the throttle valves and increase the accuracy of flow measurement.

Safety Evaluation Summary: The modified system containing the new pumps and orifice combination satisfy the capacity, separation and redundancy requirements. The increased pump discharge pressure does not interfere with the function of any other component. The new pumps require a higher horsepower; however, this does not adversely affect the diesel generators and ES bus loading or emergency bus degraded voltage concerns or the existing pump motors. The motor horsepower rating could be exceeded at pump runout conditions, which could only occur from passive system failure (system boundary failure). The component that requires system throttling is accomplished within the capabilities of the components performing the throttling. No unreviewed safety question was found to exist.

Modification: Control Building Incipient Fire Detection (SE 417109-003)

Description of Modification: The modification installed the Control Building Incipient Fire Detection Cirrus system to satisfy the requirements for one hour fire barriers and the subject fire detection system to be used in lieu of three hour fire barriers. The new system consists of approximately 1500 feet of tubing and sampling/monitoring equipment that is operated at a slight vacuum relative to the Control Building. improves the capabilities

Safety Evaluation Summary: Newly installed components do not impact safety related equipment in the event of a safe shutdown earthquake and are consistent with anti-fall down requirements. The equipment is located such that it is not subject to high energy line breaks or flooding events. The 400-watt electrical load does not adversely impact the non-NSR 1A Reactor Plant Control Center to which it is connected. No unreviewed safety question was found to exist.

Modification: Fire Zone FH-FZ-6 Automatic Wet Pipe Sprinkler Suppression. (SE-417109-008)

Description of Modification: This modification installed an automatic wet pipe sprinkler suppression system in the Chiller Room on elevation 285' of the Control Building (Fire Zone FH-FZ-6). The system was installed to comply with a regulatory commitment to justify not upgrading certain cable raceway Thermo-lag barriers to a one-hour fire rating.

Safety Evaluation Summary: The automatic wet pipe sprinkler suppression system for Fire Zone FH-FZ-6 enhances existing fire protection features. Installation of the automatic wet pipe sprinkler suppression system combined with existing fire protection features in the Zone provides a level of fire protection equivalent to that required by Appendix R. It provides reasonable assurance that the new suppression system combined with existing 50-minute cable raceway fire barriers and automatic detection will ensure that one division of safe shutdown will remain free of fire damage in the event of a fire. Its operation due to a fire, inadvertent operation, or a line break does not create unacceptable safety consequences. Therefore, this modification is acceptable as is and does not result in an unreviewed safety question.

Modification: Removal of pH recorder, relocation of conductivity recorder and creation of four new computer points for secondary plant sodium levels. (SE-128206-001)

Description of Modification: Following the change from ammonia based secondary chemistry control to one which is morphaline based, the observation of feedwater pH has been replaced by a calculated hot pH value performed in the chemistry lab. Therefore, the pH signals to the control room recorder provide little useful information. Sodium levels are more useful and important to the operators because they provide quick insight on condenser tube leakage. Therefore the pH recorder, SS-CR-806 was removed from the control room panel left front and conductivity, SS-CR-807 was relocated to the space left by SS-CR-806. A blank plate was installed in place of SS-CR-807. Sodium signals SS-CE-0260, SS-CE-0772, and SS-CE-0773 were connected to the plant computer using existing spare electrical cables. Annunciator Alarms PRF-2-4, CE-2/3, and CE-6/7 pH Hi/Lo were deleted.

Safety Evaluation Summary: This safety evaluation determined that there is no adverse affect on nuclear and/or safe plant operations, no creation of an unreviewed safety question, and no environmental impact. This modification will not adversely affect nuclear safety or safe plant operation because the pH recorder, SS-CR-806, and the annunciator alarm, PRF-2-4, do not serve a nuclear safety related function. A better method for tracking condenser tube leaks is provided since sodium levels, which are an indication of condenser inleakage are now available to the control room via the plant computer. pH values which were available in the control room are still available in the secondary plant sampling room. Since indication of pH levels are no longer considered as important as other chemistry parameters it is acceptable to delete the pH recorder and associated annunciator alarm. Safe plant operation is not affected since no interlocks or control functions are affected by this modification.

Modification: Upgrading the Fire Service Altitude Tank temperature controls (SE-113202-701)

Description of Modification: The previous temperature controls consisted of temperature switches in the base of the altitude tank. The location and style of the temperature switches made calibration difficult. The temperature switches were removed and replaced by thermowells and resistance temperature detectors (RTDs).

Safety Evaluation Summary: The probability of occurrence or the consequence of an accident or malfunction of equipment important to safety previously evaluated in the FSAR was not increased. The setpoints in FSAR Chapter 9.9.5 were changed to meet current NFPA standards. The low temperature alarm setpoint will be raised to assure tank water temperature is maintained well above freezing. This change will help operations by eliminating the need to drain the tank for calibration. All setpoints will be field verified during post installation testing. Seismic installation of new equipment was not required. This modification did not affect nuclear safety nor affect the environment.

Modification: Install close torque switch bypass on Globe valves CA-V-4A/B, CA-V-13, and CF-V-2A/B (SE-113202-758)

Description of Modification: Testing conducted in response to NRC Generic Letter 89-10 found that there are higher operating requirements on MOVs than were originally anticipated. Raising the operator torque switch settings to accommodate these higher requirements introduced new problems such as valve or operator damage due to the repeated high loads imposed under normal system operation or testing. These requirements were also magnified on MOVs that must isolate a high-energy line because the flow and differential pressures are high under these conditions. The torque switch bypass modification improved the capability of motor operated valves that must isolate flow while not compromising their reliability.

Safety Evaluation Summary: This modification will improved the MOV capability to perform their safety function by changing the MOV control scheme and effectively bypassing the torque switch until hard seat contact is achieved. At the same time, nuclear safety and valves reliability were not jeopardized. This modification resulted in no new single failure mechanisms, no new accidents, did not affect normal operation of the motor operator, nor did it impact safe shutdown of the reactor. Therefore, it was concluded that this modification had no adverse affects on nuclear safety or the environment.

Modification: Addition of a bio-sampler to the Circulating Water System MD-H304-001 (SE-113202-865)

Description of Modification: This modification drilled and taped a hole in an existing flange on the "A" Natural Draft Cooling Tower west riser pipe. A new valve was installed, which was connected to a Calgon supplied bio-sampler. The modification allowed the removal of TMM#29, which currently serves this purpose.

Safety Evaluation Summary: This modification allowed the plant to monitor biological activity in the circulating water system. The plant margin of safety was not reduced by the addition of this connection. Nuclear safety and safe plant operation are not adversely affected. There was not an increase in the probability or consequence of an accident previously evaluated in the SAR. No radiological safety concerns exist. A change to a drawing referenced in the FSAR was required. There were no unreviewed safety questions or Technical Specification changes raised by the implementation of this modification.

Modification: Air Intake Structure Manway Covers (SE-113202-898)

Description of Modification: Fabricate two watertight covers and install the covers above the manways of the Air Intake Tunnel for use during a flood emergency event. The manway covers are at the end of the air intake Structure at elevation 301'0". The Probable Maximum Flood may raise the water to elevation 309'0". Modification documents were prepared to fabricate watertight covers, to provide guidelines for storage, and to install the covers over the manways during a flood emergency event.

Safety Evaluation Summary: This modification did not alter the functions of any structure, system, or component identified in the Technical Specifications because this modification did not affect the dikes around TMI. Therefore, the installation of the covers did not create an unreviewed safety question or have an adverse affect on nuclear safety or the environment and reduced the probability of occurrence and the consequences of an accident because this modification reduced the probability and consequences of adverse flood effects on the safe plant operations.

Modification: Upgrade RC-PT-963 PPC Indication MD-H301-001 (SE-113202-900)

Description of Modification: The modification improved the indication of the RC pressure and temperature to meet the intent of Regulatory Guide 1.97. The RC indication circuitry isolated in Signal Conditioning Cabinet A1. RC pressure is presently routed to the PPC via a signal isolator in the Diverse Scram System cabinet. This makes the signal dependent upon power to the Diverse Scram System cabinet isolator. The Diverse Scram System cabinet power is less reliable than that supplied to Cabinet A1 or the PPC. Routing from a signal isolator in A1 to PPC directly improved reliability.

Safety Evaluation Summary: The modification maintained all of the present capabilities of the RC indication loop for The RC TSAT and Diverse Scram System, and improves the indication of the RC pressure. The installation of this modification did not result in an unreviewed safety question or a conflict with Technical Specifications.

Modification: AmerGen Notes Server Electric Power MD-H560-001 (SE-113202-934)

Description of Modification: AmerGen is installing LAN servers to manage the Notes databases for the AmerGen System. The servers will be installed in 1 rack, which will contain two uninterruptible power supplies. Each power supply requires a 30-amp circuit and receptacle. The scope of this project was to add two more circuits to NAB-DP-12 distribution panel on the west wall of room 111 located on the first floor of the North Office Building. This panel is powered from the 480V-208Y/120V transformer, NAB-XFMR-8, which was used to provide power to the new AmerGen LAN servers, TMI LAN servers, and telephone system. The transformer normally receives power from the 13.2kV system, but has the capability to be transferred to the 1M 480V Auxiliary and Fuel Building Heating and Ventilation Bus.

Safety Evaluation Summary: The source of power to the new distribution panel will normally be from the site 13.2kV system, which will not affect plant distribution power. There is the capability for this load to be transferred to the plant 1M 480V Auxiliary and Fuel Building Heating and Ventilation Bus. This is a not-vital source of power, and the addition of this 2.5 kVA is addressed by Electrical Load Sheet T1-700-92-022. In addition, this load as it translated to the 4kV buses is monitored to insure that it is less than the maximum allowed in accordance with SDD-T1-000 Division I Section 700. Therefore, the installation of this modification will not affect nuclear safety, create an unreviewed safety question, or affect any Technical Specification.

Modification: Pretreatment Supply Well Pumps Control Change MD-H170-001 (SE-113202-872)

Description of Modification: This modifies the control circuits for pretreatment well pumps, WT-P-40 A/B/C, to provide indication when the pump is running, to provide a manual start control, and to modify the control circuit to eliminate the pump trouble alarm when the pump is in the off position.

Safety Evaluation Summary: The pretreatment system has no interface with plant nuclear safety related equipment and does not affect safe plant operations. The pretreatment system provides raw, well water for use in the plant. The circuit being modified will not affect the ability of the system to continue performing this function, and does not change electrical plant loading. Therefore, this modification did not result in an unreviewed safety question or Technical Specification changes.

Modification: DTCS Software Changes for 13R Outage MD-274-001 (SE-113202-905)

Description of Modification: About 20 enhancements to the DTCS software were performed to improve accuracy of information, provide more information to the operator, and reduce nuisance alarms.

Safety Evaluation Summary: System functions were maintained with enhancements to improve accuracy of information, provide more information to the operator, and reduce nuisance alarms. Important features affected by the modification included turbine overspeed protection, generator sequential trip logic, and control valve curves. However, the function of these features remained the same and the operation of the modified software was tested in accordance with the modification documentation.

Modification: Elimination of Condensation at Hydrogen Recombiner MD-H159-001 (SE-113202-912)

Description of Modification: Modification MKD-H159-001 installed electrical heat trace at the inlet and outlet piping of the Hydrogen Recombiners. Condensation in the inlet and outlet piping of the Recombiner combines with loop seals in the piping might cause entrained water to enter the HR blower. The entrained water could result in long term degradation of the blower as well as degradation of the flow rate through the recombiner.

Safety Evaluation Summary: This change eliminated the potential for condensation in the inlet and outlet piping of the Hydrogen Recombiner. This is accomplished by installing heat trace around the piping, powered from the same electrical power source as the operating Hydrogen Recombiner. The heat trace will be insulated to help maintain process temperatures of the piping. The additional weight of the heat trace and insulation has been evaluated and based on the close support spacing and the small amount of weight added the pipe supports are still acceptable. The additional electrical load applied to the EDGs is minimal and can easily be handled by the diesels considering the data in Table 8.2-9 of the FSAR Section 8. 24 hours after a large break LOCA several major loads are removed from service providing enough capacity to supply the newly installed heat trace. This change will safely prevent condensation in the recombiner inlet and outlet piping. It is neither an unreviewed safety question nor an environmental concern.

Modification: Change Control Logic for Indication of CW-P-3A/B and CW-P-4A/B MD-H049-001 (SE-113202-856)

Description of Modification: The purpose of this modification is to change the control logic for Amertap pumps CW-P-3A/B and CW-P-4A/B. The control circuit for the pump is separate from the pump power circuit. This creates a problem in that when the start pushbutton is depressed, the starter picks up and the "Red" pump running indicating lamp comes on even if the circuit breaker that provides power to the pumps is open. This modification will install an undervoltage relay that will sense the breaker output, and will prevent the pump starter contact from closing when there is no power indicated at the breaker output.

Safety Evaluation Summary: The CW-P-3A/A AND CW-P-4A/B pumps are used in the Amertap system, which is used to inject balls into the Main Condensers to clean the heat exchanger tubes. This system does not interface with any nuclear safety systems. The addition of four undervoltage relays will have an insignificant change on plant electrical loading. This modification did not result in an unreviewed safety question or change to the Technical Specifications.

Modification: DH Flow CF Tank Level Indicator Replacement MD-H378-001 (SE-113202-917)

Description of Modification: The modification replaced analog meter type movement indicators with solid state bargraph/digital display indicators (Dixsons) as utilized elsewhere for important indications in the control room. The replacements are made to improve accuracy.

Safety Evaluation Summary: The hardware change did not affect the function or quality classification. The modification maintained all of the present capabilities of the indication loop for DH Flow and CF Tank level. It improved the accuracy of the indications. It did not increase the probability of occurrence or the consequences of an accident previously evaluated in the SAR because process variable indications are unrelated to accidents as described in the FSAR.

Modification: ES Trip of SR-P-1C MD-H520-001 (SE-113202-923)

Description of Modification: This modification reconfigured the trip logic to trip SR-P-1C, if SR-P-1B is running when an ES signal is present.

Safety Evaluation Summary: Limiting the operation of SR pumps powered from the 1T Bus to one under ES conditions provides additional voltage margin at the IT 480V ES Buses under degraded grid voltage conditions. This load reduction is necessary to ensure adequate voltage levels to the DR-P-1B motor when operating the pump with high river level conditions (maximum flow condition) during a large break LOCA with a degraded grid voltage just above the degraded grid under voltage relay minimum setting. The load reduction is also necessary to ensure adequate voltage levels for DR-0S-1B and NR-S-1C under the above conditions. To ensure that only one SR System services no nuclear safety related system. For normal plant operation 2-SR pumps are required to be in service to satisfy normal equipment heat removal functions. The operation of the standby SR pump is not affected; it will automatically start if an operating pump trips. SR System normal operation is not affected by this modification.

Modification: Decay Heat Closed Cooling Water Chemical Injection Taps MD-H526-001 (SE-113202-924)

Description of Modification: This modification installed six new chemical cleaning ports on the Decay Closed Cooling Water system. These ports will be used to clean the closed cooling waterside of the Decay Heat Removal Coolers, DH-C-1A and 1B.

Safety Evaluation Summary: The modification leaves the plant operation unchanged. The only noticeable change due to the modification will be the improved cleanliness of the Decay Heat Removal Coolers due to the ability to inject chemical cleaners. The plant margin of safety is not reduced by the addition of this equipment. Nuclear safety and safe plant operation are not adversely affected. There is not an increase in the probability or consequence of an accident previously evaluated in the SAR. No radiological safety concerns exist. No changes are required in the FSAR. This modification did not result in an unreviewed safety question or technical specification change.

Modification: NDCT 13R Inspection, Repairs, and Rebuild MD-H029-002, MD-F546-001 (SE-120049-002), (SE-410039-001)

Description of Modification: A Marley Cooling Tower inspector will inspect The NDCTs. The repairs identified during the previous outage will also be repaired in accordance with the original tower design. All bolts removed for wood member replacement or bolts found broken will be replaced with stainless steel for better chemical resistance. A wholesale replacement of galvanized bolting with stainless steel on

the fire and lighting supports in the hot basin will be done. The structural steel frame that is exposed by the cooling tower repack modification will be blasted and painted as part of this modification. Fill will be removed from the upper 3 lifts of the A NDCT as well as limited fill removal in sections of the B tower, repairs to any broken degraded or damaged wooden members, and all upper sections of the louver face columns, stub columns, and outer radial girts will be replaced as they are exposed by the removal of fill.

Safety Evaluation Summary: This modification did not conduct any tests or experiments which are not described in the FSAR, Technical Specifications or any other part of the SAR because there are no tests or experiments associated with this modification. The inspections and repairs defined by this modification document will help assure the long-term structural integrity of the towers.

Modification: Access Hatch Teflon Seal Shielding MD-H142-001 (SE-120051-001)

Description of Modification: This modification installed lead shielding assemblies to prevent damaging post-LOCA radiation exposure for the teflon shaft packing in the Personnel and Emergency Access Hatch inner gear boxes.

Safety Evaluation Summary: The defined margin of safety for this modification is related to containment isolation, is based upon the design containment leak rate, and the provision for other leakage barriers in series with the related inner bulkhead shaft packing. The installation and use of this shielding did not threaten to affect that defined leak rate, or series leakage barrier, and did not therefore reduce the margin of safety as defined in the bases for the SAR or for any Technical Specification.

Modification: Pressurizer Support Modification MD-H418-001 (SE-120062-001)

Description of Modification: This modification added lateral restraints to bring the Pressurizer lugs and bolts back into compliance for combining loads (Deadweight + 100% thermal and SSE).

Safety Evaluation Summary: The modification re-established compliance with the FSAR design basis for the support system. As a result, the FSAR margin of safety, nuclear plant operation and safety, probability of occurrence of an accident previously evaluated or new, or margin of safety in the FSAR is not affected, but in effect is being re-established.

Modification: High Temperature Isolation of Letdown Line MD-G974-001 (SE-410036-001)

Description of Modification: This modification installed two independent temperature switches that will be used to isolate a letdown line break outside of containment and bypass switches will be installed to assure letdown can be maintained if a temperature switch were to fail. This interlock is being added to minimize the release of high-energy fluid into the Auxiliary Building in the event of a letdown line rupture.

Safety Evaluation Summary: This modification will not adversely affect nuclear or safe pant operations. The temperature switch interlock does not over-ride or interface with any existing NSR function of the affected Make-up valves. Failure of the temperature switch that would cause the Make-up valves to close will be detected by existing high Pressurizer level alarms and low letdown flow alarm. Alarms also exist for MU-V0002A and MU-V0002B. The ability of MU-V-0002B to close against a high differential pressure has been addressed by calculation C-1101-900-E410-039, rev 2. The assumptions in this

calculation bound this modification. Calculation C1101-211-E220-72 addresses the ability of MU-V-0003 to close against a high differential pressure. No unreviewed safety question was found to exist.

Modification: Replace RC-P-1C Main Flange Bolting Replacement, Lower Seal Housing MD-G943-001 (SE-410059-001)

Description of Modification: The RC-P-1C main flange bolts were replaced with studs, the lower seal housing machined to accept a gasket, and re-routing the #1 seal leakoff and bypass pipes and #3 seal leakoff.

Safety Evaluation Summary: This modification left the plant operation unchanged. The only noticeable change due to the modification was the improved nut torque time and long term reliability of the lower seal to main flange joint. The plant margin of safety is not reduced by the replacement of this equipment. Nuclear safety and safe plant operation were not adversely affected. There was not an increase in the probability or consequence of an accident previously evaluated in the FSAR. No radiological safety concerns exist. No changes were required in the FSAR. This modification did not result in an unreviewed safety question or technical specification change.

Modification: Cable Drive for Fuel Transfer System CCD-412690-001 (SE-412690-001)

Description of Modification: Both east and west fuel transfer units were modified. Automatic carriage hoist cutouts were added. New cables and electrical equipment supports were added

Safety Evaluation Summary: The proposed change did not violate any license requirement, regulation, or technical specification. All fuel handling, storage, and operation requirements remained unchanged. The proposed change did not involve any radiological safety concern since no fuel handling changes with regard to water levels, monitoring, or releases occur.

Modification: Cable Upsize and Re-Route Modification MD-D542-001 (SE-417109-004)

Description of Modification: The purpose of the modification was to remediate power cable LS6 overloading condition caused by Thermo-Lag fire barrier 1CCD-FB02. In addition, the modification prevented overloading of power cables due to Mecatiss fire barrier material that was required to be installed to upgrade deficient Thermo-Lag fire barriers.

Safety Evaluation Summary: This modification did not introduce any new accident or malfunction not previously evaluated, nor does the modification increase the likelihood of occurrence or consequences of any accident as analyzed in the UFSAR (2.3.1). This modification did not decrease the margin of safety as described in the Technical Specification because the modification does not impact any system safety functions. This evaluation concluded that there is no unreviewed safety question per 10 CFR 50.59 and no changes to the Three Mile Island Nuclear Generating Station or Unit 1 Technical Specifications were required.

Modification: D542: Thermo-Lag Barrier Modification Phase FA: Combustible Gas Detector MD-D542-006 (SE-417109-006)

Description of Modification: The purpose of this modification was to install a combustible gas monitor on Control Building 306 level. This device will monitor for the presence of acetylene leakage from the supply line to the spectrophotometers in the Primary Lab with five remote detector heads.

Safety Evaluation Summary: Nuclear safety and safe plant operations were not affected by this modification since this detector is independent of other plant systems and initiates no actions outside of its own local, audible alarm.

Modification: DH-V-001 and DH-V-002 Pressure Locking Mod MD-G973-001 (SE-120044-001)

Description of Modification: The purpose of this modification was to provide a pressure relief path for DH-V-1 and DH-V-2 bonnets and the interconnecting piping to prevent pressure licking of these valves or over pressurization of the piping.

Safety Evaluation Summary: The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report was not increased, because there was no adverse impact of the capabilities or operation of DH-V-1 and DH-V-2 or any other equipment important to safety as a result of the modification. The modification provided a passive pressure relief path back to the RCS should pressure inside the valves become greater than the pressure outside the valves. During normal plant operation, there will be no change to system operation. The new tubing and valves are passive and provide any other function than maintaining the system pressure boundary. The valve will relieve pressure from the inside of the DH-V-1 and DH-V-2 if the pressure inside one of these valves is greater than the RCS pressure. The RCS pressure boundary is maintained by the modification being designed, fabricated, and tested in accordance with applicable construction codes and therefore the modification did not degrade plant systems.

Modification: Computer Access Control System Upgrade MD-G999-001 (SE-410055-001)

Description of Modification: This modification replaced the security network servers and multiplexer boards in MUX A, B, C, D, E, and F. As part of this work, new panels were installed in the Central Alarm Station to house the new MUX D, E, and F multiplexer boards, and a new panel was installed beside MUX A to provide additional space for the new MUX A boards. New Guard Station computers were also installed in the Central Alarm Station and Secondary Alarm Station, and will communicate with the new servers. The multiplexer board at the South Gate was also be replaced.

Safety Evaluation Summary: This activity did not adversely affect nuclear safety or safe plant operations because the security computer system's only interface with plants systems is the 120 VAC that powers the multiplexer boards. This is the same power source used by the previous multiplexers, and the loads will not change. The security computer system itself is not used for any plant operations.

IV. Electrical Jumpers, Lifted Leads, and Temporary Mechanical Modifications

A Safety Evaluation was performed for each of Electrical Jumpers, Lifted Leads, and Temporary Mechanical Modifications conducted at TMI-1 as identified below. The results of those evaluations found, based on the description of the activity, that the probability of occurrence or consequences of an accident or malfunction either previously analyzed or of a new or different type was not increased. The experiments or tests reduced no Technical

Specification margin of safety. No Unreviewed Safety Question resulted from the experiments or tests.

Modification: Local Area Network (LAN) Service for Control Room Console CCR (TMM 18) MD-H560-001 (SE-113202-934)

Description of Modification: An existing communications control cable with spare conductors was used to provide LAN service to computer console CCR. The cable was run from control building to the OSC area.

Safety Evaluation Summary: The function of the cable or other plant component or system was not changed by this temporary modification. No unreviewed safety question was found to exist.

Modification: "Hot" Circulating Water Flow to the Calgon Biofilm Sampling Device (TMM 29) MD-H304-001 (SE-113202-885)

Description of Modification: A temporary insulated hose was routed from CW-V-104A to provide approximately five gallons per minute of "hot" flow to the Calgon sampling device for means of evaluating the effectiveness of the biocide treatments.

Safety Evaluation Summary: Sample flow through the valve and piping is 5 gallons per minute (approximately one thousandth of one percent of the total system flow), thereby having no impact on cooling capability of the system. No unreviewed safety question was found to exist.

Modification: Addition of a Sample Point on CW-P-1F Outlet (TMM 34 and 35)

Description of Modification: A chemical sample/monitoring point consisting of 3/4" piping nipples and a ball valve was installed on the outlet of circulating water pump CW-P-1E to support the switch from acid scale control to the A.E.C. scale control process.

Safety Evaluation Summary: Sample flow through the individual valve and piping installations is five gallons per minute (approximately one thousandth of one percent of the total system flow), thereby having no impact on cooling capability of the system. No unreviewed safety question was found to exist.

Modification: WT-LS-216 Electrical Jumper (EJ 4)

Description of Modification: WT-P-12 would not run due to low level interlock with WT-LS-12, which would not run due to low level interlock with WT-LS-216. This electrical jumper jumped out the interlock to allow WT-P-12 to operate. WT-P-12 is taking suction from WT-T-17 to allow for boron injection to the secondary plant. WT-T-25 has a level of morphaline in it, but the low-level interlock is actuated preventing operation of WT-P-12.

Safety Evaluation Summary: An evaluation of the temporary jumper found, based on a review of supporting documentation, that the modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the

margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Deactivation of Unit 2 Fire Service Panels Annunciator Power (EJ 5, EJ 7, EJ 19, EJ 20, LL 3, LL4, LL5, and LL6)

Description of Modification: This jumper de-energized annunciator power to out of service panels so that dismantlement crews could expedite removal of these panels and associated cables. CCR 132955 permanently removed these panels from service.

Safety Evaluation Summary: An evaluation of the temporary jumpers and lifted leads found, based on a review of supporting documentation, that the modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated, and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: WT-P-5A (EJ 6)
WT-P-5B (EJ 11)

Description of Modification: These jumpers provided for continuous WT-P-5A/B operations during FS-T-1 system outage for I&C removal of level control devices. These jumpers bypass the high-level cutout switches so that the pump will continue to run.

Safety Evaluation Summary: An evaluation of the temporary jumper found, based on a review of supporting documentation, that the modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: 2AH-E-8C Annunciator Alarm (EJ 6)

Description of Modification: This temporary modification installed a jumper inside the power supply cabinet for Unit 2 Auxiliary Building Exhaust fan, 2AH-E-8C, while the motor for the fan is being repaired or replaced. While this supply breaker is de-energized, the OLXC relay is de-energized which causes Annunciator Alarm 25.3A2 (Computer point # 2L089, Auxiliary Building Exhaust Fan Trip) to stay in the alarm state. While in this mode the current operating fan 2AH-E-8D will not have the capability to trip the alarm if a problem occurs since there is no reflash capability available. The jumper is to be removed when the motor for 2AH-E-8C is restored.

Safety Evaluation Summary: An evaluation of the temporary jumper found, based on a review of supporting documentation, that the modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the

margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: IE Inverter Output Meter (EJ 10, EJ 11)

Description of Modification: This temporary jumper was installed to monitor IE inverter output voltage and current.

Safety Evaluation Summary: An evaluation of the temporary jumper found, based on a review of supporting documentation, that the modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Temporary Relocation of the HP Control Point (EJ 15)

Description of Modification: This temporary jumper was required to provide site LAN and Telephone System connections for the capability of operating a temporary HP Control Point north of the Hot Tool Room area. The temporary jumper will be an extension of existing LAN and Telephone System connections that are presently functional at the Reactor Building personnel hatch area.

Safety Evaluation Summary: A safety evaluation showed that the temporary jumper was to remain in place until the remodeling of the HP Control Point was complete and the control point operation was moved back to the Control Building. The temporary jumper did not interface with the operation or function of any plant systems, plant components, or any plant safety system. Therefore, it did not affect nuclear safety or safe plant operations. There were no changes in the facility as a part of the temporary change. There were no tests or experiments introduced as a part of this temporary change. The LAN or Telephone Systems operation or functions are not described in the plant Technical Specification.

Modification: Industrial Cooler Level Switch AH-LS763 Jumper (EJ 17)

Description of Modification: This temporary jumper allowed a bypass of the Lo-Lo AH-C-1B sump level protective features (trip industrial cooler heaters for sump of spray pumps). The jumper allowed this equipment to operate while the cooler was operating to properly cool the Reactor Building.

Safety Evaluation Summary: A safety evaluation showed that this jumper had no adverse effect on equipment because the Lo sump level alarm will annunciate in the control room at a higher sump level and operators could de-energize heaters and spray pumps, and check the sump level. The modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: SW-P-1B Breaker Troubleshoot (EJ 19)

- SW-P-1A Breaker Troubleshoot (EJ 19)
- SW-P-1B Breaker Troubleshoot (EJ 20)
- SW-P-1A Breaker Troubleshoot (EJ 20)
- SW-P-1B Breaker Troubleshoot (EJ 21)
- SW-P-1A Breaker Troubleshoot (EJ 21)

Description of Modification: These temporary modifications were to monitor electrical connections on SW-P-1A/B to gather data for troubleshooting.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: SBO Diesel Generator TA Alarm Relay (LL 4)

Description of Modification: This temporary lifted lead is to de-energize the SBO Diesel Generator EMRP TA Relay Coil, which is failing and should not remain energized until it is replaced. This temporary lifted lead will remain in place until the relay coil is replaced.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Temporary Removal of Page Speaker S-74 (LL 108 and LL 109)

Description of Modification: This temporary modification removed interference items until a permanent modification relocates the speaker. The conduit feeding S-74 is preventing the wrapping of ICCE-FB01 with new fire barrier material.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Chilled Water to refrigerant reclaimer (TMM 2)

Description of Modification: This temporary modification routed a slip stream of chilled water to cool the refrigerant reclaimer unit and then returned to the chilled water system. The affect on operation of the system with the current ambient conditions will be an insignificant increase in heat load.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Delay Chamber on Auxiliary and Fuel Handling Buildings Differential Pressure Reference Line (TMM 4)

Description of Modification: This temporary modification installed a delay chamber on the Auxiliary and Fuel Handling Buildings Differential Pressure Reference Line to eliminate nuisance alarms to Unit 1's PPC caused by windy conditions on Unit 2's Penthouse Roof.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Supply Filtered Water to the Ecolochem demineralized water package system (TMM 7)

Description of Modification: This temporary modification supplied filtered water to the Ecolochem Demineralized Water Package System. The filtered water passed through IWT Carloon Filters to lower the solids content (silt density index) – allowing use of the Reverse Osmosis units.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Bypass Well Water Supply to the Clearwell (TMM 8)

Description of Modification: This temporary modification provided a bypass for the well water supply to the clearwell during installation of modification MD-G926-001 (Well water supply to the pre-treatment clear well piping re-route).

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Monitor GS Pressure greater than 10 psig (TMM 8)

Description of Modification: This temporary modification provided a pressure indication of GS header above 10 psig.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Hydrazine Injection to 8th Stage Drains (TMM 8)

Description of Modification: This temporary modification allowed injection of Hydrazine into the 8th stage heater drains to help reduce the dissolved oxygen levels.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Mecatiss Installation Unistrut Support Temporary Removal (TMM 8)

Description of Modification: This temporary modification removed an 18 inch P1000 Unistrut to allow Mecatiss installers access to perform upgrade/modifications to Thermolag on Fire Envelope 1FHC-FB20.

Safety Evaluation Summary: An evaluation showed that the temporary support affords a safety factor of 2.1 on the restraint. The temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Temporary Removal of Fire Service Rod Hangers (TMM 14)

Description of Modification: This temporary modification moved three rod hangers located in the area over the Mgr. RFO Office at 305" elevation in the Control Building because it could not be accessed for Mecatiss modifications by workers due to the close confines involved. Three-rod hangers for the Fire Service System required temporary disconnection to permit Mecatiss worker access.

Safety Evaluation Summary: A safety evaluation showed that the function of the rod hangers was for dead weight only and that the fire service affected is non-seismic and therefore, had no nuclear safety impact or impact on safe plant operation. The temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously

evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: CO-P-1C lower motor bearing oil drain (TMM 15)

Description of Modification: This modification was done to simplify draining oil from the lower motor bearing oil sightglass taps on condensate pump CO-P-1C.

Safety Evaluation Summary: A safety evaluation showed that this temporary modification was installed on a QC "other" component and will in no way affect safety. The evaluation showed that the modification would have no affect on the condensate pump. Even a failure of the temporary modification would only cause a loss of a condensate pump and would not impact plant safety.

Modification: Move Conduit RK-961 for Mecatiss Work (TMM 19)

Description of Modification: This temporary modification involved loosening the conduit clamps for conduit RK-961 on three adjacent supports, sliding the conduit to the side a maximum of six inches and re-tightening the conduit straps. The temporary modification was required to permit the installation of Mecatiss fire barrier on an adjacent conduit. Once the Mecatiss is installed, the conduit was moved back to its original location by reversing the procedure.

Safety Evaluation Summary: An evaluation indicated that this modification did not have the potential to adversely affect nuclear safety or safe plant operations because the location of the conduit on the support had no impact on operation, configuration, or performance of any structure, component, or system. There were no changes made to the plant during the temporary modification, which affect the facility as described in the FSAR or which affect any procedure described in the FSAR. No tests or experiments were conducted as a part of the temporary modification.

Modification: Domestic Hot Water Heater Magneto Hydrodynamic Water Treatment (TMM 19)

Description of Modification: This temporary modification provided a magnetic field around Domestic Water piping. The magneto-hydrodynamic water treatment was postulated to alter the crystallization kinetics of minerals, preventing scale build-up on surfaces. The Domestic Hot Water Heater, DO-C-0004, has experienced failures on several occasions due to the build-up of scale. A trial period will evaluate the effectiveness of magneto-hydrodynamic treatment.

Safety Evaluation Summary: An evaluation showed that the Domestic Water System did not perform any safety function support of plant operation or in the mitigation of a nuclear transient or accident. The process of heating and distributing domestic water was not compromised by this TMM activity.

Modification: Fire Service Sprinkler Head Removal (TMM 19, 20)

Description of Modification: These temporary modifications removed two fire service sprinkler heads to allow access to area above 1AXC-FBO5 for Mecatiss work in the area.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Bypass of AH-C-1B LS763X in Control Room (TMM 21)

Description of Modification: This temporary modification held relay LS763X in the closed position to bypass/disable the limit switch using a tie-wrap to allow operation of AH-C-1B spray pumps because AH-LS-763 was damaged by ice and was not operable.

Safety Evaluation Summary: An evaluation showed that the function of LS-763 is to stop the spray pumps and de-energize the pan heaters on a low level in the pan. This function will be provided by operator action in response to Panalarm PRF-8-8 (AH-C-1B sump level low), which actuates at a level above the normal setpoint of AH-LS-763. Therefore, there is no adverse impact on nuclear safety or safe plant operations by the placement of this TMM.

Modification: Turbine Vacuum Pressure Switch (TMM 22)

Description of Modification: This temporary modification connected spare absolute pressure switch to the spare tap of the condenser. I&C will periodically check setpoint during cycle 12 to trend switch performance.

Safety Evaluation Summary: An evaluation showed that the temporary switch was not connected to equipment that was important to safety. Failure of the switch may cause some air leakage into the condenser, but is isolatable via the isolation valve. Accidents on malfunction of the condenser are not evaluated in the SAR. No Technical Specification limits apply to the condenser.

Modification: Secure CB Manual Damper Open at AH-D-39 (TMM 23)

Description of Modification: This temporary modification will keep the damper open at AH-D-39 because it has failed open.

Safety Evaluation Summary: An evaluation showed that this TMM secures the balancing damper immediately upstream of AH-D-39 (the Containment Building Emergency Isolation damper for outside air supply). The damper (balancing) performs no design basis function since there is no reason to balance flow at this duck location. If damper were to fail back to closed position it doesn't affect safety function of Containment Building Isolation.

Modification: IWTS Sump Sludge Transfer

Description of Modification: This modification was instituted because the IWTS Sump has accumulated large amounts of sludge. Since IWTS is not primarily a solids removal process, transfer of the sludge to IWFS is desired. An isolation valve, piping, and hoses were added to the IWTS Sump Pump discharge header and routed to the IWFS sump.

Safety Evaluation Summary: An evaluation showed that the Industrial Waste Filter System does not perform any safety function support of plant operation or in the mitigation of a nuclear transient or accident. Processing of the various sumps, drains and process wastes is not compromised by this TMM activity. The delay in restoring IWTS processing capability by isolating the TMM is substantial with respect to the duration of sump process. Physical controls have been established within the TMM requirements ensure inadvertent release or discharge of the IWTS Sump contents is precluded.

Modification: HM-FI-3A and 4A Removal (TMM 27 and 28)

Description of Modification: These temporary modifications remove HM-FI-3A and 4A to facilitate pressure testing of HM-AE-42A.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Speed Control Valve (TMM 30)

Description of Modification: The temporary modification consisted of a speed control valve installed between the output of pressure controller and inlet of actuator for DW-V-3. This speed control valve provides better pressure control when changing supply from the Million-Gallon Tank to the Water Trailer. Better control will prevent the Water Trailer from tripping offline due to a high or low-pressure surge.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and does not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: Move Cable for AH-D-0022A Limit Switch (TMM 35)

Description of Modification: This TMM allows conduit to be removed and the cable to be rerouted for the position limit switch for AHK-D-0022A (Auxiliary and Fuel Handling Building Exhaust Fan AH-E-0014A discharge damper). The conduit currently interferes with removal of AH-E-0014B fan and motor, which requires corrective maintenance.

Safety Evaluation Summary: An evaluation showed that the Auxiliary and Fuel Handling Building Ventilation System is not safety related, therefore neither is the subject limit switch. Rerouting the cable for the limit switch has no adverse affect on safe plant operations because of the appropriate support prescribed for the cable, and the worst case failure for this temporary modification would be a ventilation system shutdown due to fan trip (limit switch is permissive for AH-E-14A start).

Modification: Nitrogen Supply to Main Condenser (TMM 66)

Description of Modification: This temporary modification was to provide an adjustable and measurable supply of nitrogen to the main condenser for dissolved oxygen reduction.

Safety Evaluation Summary: An evaluation showed that the temporary modifications did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.

Modification: ALC-P-5 Low Level Interlock Jumper (EJ 5)

Description of Modification: The jumper is installed to allow ALC-5 to run beyond its low-level interlock. The low-level interlock is provided to protect the pump during normal remote operations of the pump. Because of higher radioactivity levels of the water currently in CC-T-2 and the desire to minimize the generation of radwaste liquids, it is desirable to run the pump to the lowest point possible to transfer the water to CC-T-1 in a timely manner. This will minimize the potential for water left in the tank to contaminate clean processed water from the WECST. If the pump is operated when the jumper is in place, operators will be stationed locally at the pump and at the pump controls to shut down the pump immediately upon indication that the pump has lost suction, if cavitation noise is present or the local discharge pressure indication becomes erratic.

Safety Evaluation Summary: With the additional monitoring to ensure protection of the pump, there is no potential for this jumper to adversely affect safe plant operation. Nuclear safety is not affected because ASC-P-5 is not required for safe plant shutdown or to mitigate any design basis accidents. It did not change the facility as described in the SAR, did not change any procedures described in the FSAR, no tests or experiments were conducted by this change, and this change did not conflict with the requirements of Technical Specifications. Therefore, no unreviewed safety question exists, nor are any Technical Specification changes required.

Modification: Installation of Monitoring Equipment (EJ 6)

Description of Modification: The purpose of this change is to monitor "RR" QA Class 1A inverter DC overcurrent MRI meter input and output.

Safety Evaluation Summary: This change does not have the potential to adversely affect nuclear safety or safe plant operations because it is diagnostic equipment only and does not defeat isolation or separation between A and B trains of equipment. This installation of monitoring equipment did not make changes to the facility or procedures as described in the Safety Analysis Report. No tests or experiments are conducted that are not described in the safety analysis report; equipment being installed is for normal diagnostics and monitoring only. As a result of the above, and review of the Technical Specifications, this jumper does not conflict with requirements of plant Technical Specifications.

Modification: Well Water Pump C Logic Changes (EJ 6, LL 8)

Description of Modification: This temporary modification places Pretreatment Well A (WT-P-0040A) logic onto Well C (WT-P-0040C) by jumper and associated lifted lead. This causes Well C to operate in conjunction with Well A, diluting the tritium concentration in Well C.

Safety Evaluation Summary: The Water Pretreatment System does not perform any safety function support of plant operation or in the mitigation of a nuclear transient or accident. This temporary modification changes the logic of the well pump operation and does not affect the capacity of the well pumps, storage volume of the pretreatment clearwell, or the operation of the Filtered Water Pumps. Condition monitoring of the clear well level is not affected. Therefore, operators will be alerted of any potential problems with well pump operation so that corrective actions can be initiated.

Modification: 1A Inverter Monitoring (EJ 9)

Description of Modification: This temporary modification is to monitor AC current and voltage input to the 1A Inverter with an Omega Reliable Power Meter.

Safety Evaluation Summary: This change did not have the potential to adversely affect nuclear safety or safe plant operations because it is diagnostic equipment only and does not defeat isolation or separation between A and B train equipment. The installation of monitoring equipment did not make changes to the facility or procedures as described in the safety analysis report. No tests or experiments were conducted that are not described in the safety analysis report; equipment being installed is for normal diagnostics and monitoring only. As a result of the above, and review of Technical Specifications, this jumper did not conflict with requirements of plant Technical Specifications. Note: NSR fuses were installed as isolation between class 1E and non-class 1E systems.

Modification: Temporary Removal of Screen House Trash Pit Microwave Detection Unit (EJ 9)

Description of Modification: The temporary jumper completed the alarm circuits at the Screen House protected area fence to maintain the required plant intrusion detection. Final intrusion detection testing will be completed using the standard Security Department procedures.

Safety Evaluation Summary: The microwave unit, being replaced by the electrical jumper, over the Screen House trash pit area is not required to maintain security perimeter intrusion detection. Double locking the trash pit cover is adequate security measure to maintain plant safety per the Site Security Plan. The temporary electrical jumper will complete the present supervise alarm circuit as required by the Site Security Plan. This temporary modification does not affect any procedures or operating descriptions as described in the TMI Technical Specifications. Therefore, this jumper will not affect nuclear safety or safe plant operation.

Modification: Temporary Jumper to Rad Waste Panel Control Power (EJ 12)

Description of Modification: The purpose of the temporary jumper is to provide temporary power to the rad waste panel 1B-480V MCC during bus cleaning to maintain RCS on cleanup and other miscellaneous functions.

Safety Evaluation Summary: This temporary modification does not affect nuclear safety or safe plant operations. It provides a temporary power supply to equipment typically powered from a balance-of-plant power supply with the reactor subcritical. The change enhances safe plant operations by allowing

reactor coolant system clean up during a scheduled maintenance bus cleaning outage. Power supplies to the rad waste panel are not described in the FSAR. This modification makes temporary changes that will be removed prior to criticality.

Modification: ESAS Bypass Jumper CM-V-1 (EJ 13)

Description of Modification: The purpose of the temporary modification is to maintain equipment required for shut down operation while replacing a ESAS relay.

Safety Evaluation Summary: This change does not conflict with the requirements of the Technical Specifications because all action statements for ESAS require cold shutdown operation when portions of the system are rendered inoperable. The plant will be in cold shutdown mode while the jumpers are installed. All requirements of Technical Specifications Table 3.5.1 are therefore met. With the plant in cold shutdown, ESAS High Pressure Injection is bypassed, and Reactor Building isolation can be performed manually to low pressure containment closure. No unreviewed safety question was found to exist.

Modification: ESAS Bypass Jumper CM-V-3 (EJ 13)

Description of Modification: This temporary modification is to maintain equipment required for shutdown operation while replacing ESAS relays.

Safety Evaluation Summary: This change does not conflict with the requirements of the Technical Specifications because all action statements for ESAS require cold shutdown operation when portions of the system are rendered inoperable. The plant will be in cold shutdown mode while the jumpers are installed. With the plant in cold shutdown, ESAS High Pressure Injection is bypassed, and Reactor Building isolation can be performed manually to low pressure containment closure.

Modification: ESAS Bypass Jumper CM-V-1 (EJ 14)

Description of Modification: This temporary modification is to maintain equipment required for shutdown operation while replacing ESAS relays.

Safety Evaluation Summary: This change does not conflict with the requirements of the Technical Specifications because all action statements for ESAS require cold shutdown operation when portions of the system are rendered inoperable. The plant will be in cold shutdown mode while the jumpers are installed. With the plant in cold shutdown, ESAS High Pressure Injection is bypassed, and Reactor Building isolation can be performed manually to low pressure containment closure.

Modification: Industrial Cooler Level Switch AH-LS-763 Jumper (EJ 17)

Description of Modification: The reason for this temporary modification was a malfunctioning level switch. This switch was the lo-lo level switch for the new industrial cooler, AH-C-1B, sump that protects cooler spray pumps and heaters. This jumper bypassed the switch so spray pumps and heaters operate and the cooler operates normally. The level switch will be repaired or replaced on a job order.

Safety Evaluation Summary: Installation of the electrical jumper did not adversely affect nuclear safety or safe plant operations because this allowed proper operation of the Industrial Cooler, AH-C-1B, to allow cooling of the Reactor Building. The Lo-Lo level switch for the cooler sump is installed to trip the spray pumps and de-energize the sump heaters to protect the equipment on loss of level in the sump. By jumpering out the malfunctioning Lo-Lo level switch, Plant Operations will rely on the Lo level switch to annunciate in the Main Control Room to protect the equipment on the cooler. When the alarm annunciates in the control room, operators will turn off the spray pumps and heaters, and check for proper sump level before returning the equipment to service. Whether or not this equipment (heaters and spray pumps) operates has no affect on nuclear safety or safe plant operations. Reactor Building temperature can be maintained within operating limits without operation of this equipment.

Modification: Temporary Removal of Screen House Trash Pit Microwave Detection Unit (EJ 20, LL 4)

Description of Modification: The purpose of this temporary modification was to remove the Screen House trash pit microwave detection unit and re-install it in the Air-Intake Building, double lock the trash pit cover to provide adequate security measures, and not require a posted security person.

Safety Evaluation Summary: The microwave unit, being replaced by the electrical jumper, over the Screen House trash pit area was not required to maintain security perimeter intrusion detection. Double locking the trash pit cover was adequate security measure to maintain plant safety per the Site Security Plan. The temporary electrical jumper completed the present supervise alarm circuit as required by the Site Security Plan. This temporary modification did not affect any procedures or operating descriptions as described in the TMI Technical Specifications. Therefore, this jumper did not affect nuclear safety or safe plant operation.

Modification: EOF Y2K Backup Radio Communication (EJ 24)

Description of Modification: This temporary modification was to provide temporary radio communications between TMI and the EOF using the OPS-4 radio remote control interface connections. This temporary communications connection was used as a backup year 2000 communications path to the EOF.

Safety Evaluation Summary: This jumper was only to provide temporary radio communications to the EOF using the OPS-4 radio remote control interface connections. This temporary communications connection will be used as a backup Year 2000 communications path to the EAOF. The installation of the electrical jumper did not affect the operation of the OPS-1, OPS-2, OPS-3, M/R, Security, or new EARS radio systems. A training handout was completed to provide radio usage instructions for this backup communications path.

Modification: Reactor Building Fire Tek Panel Temporary Modification (EJ 26)

Description of Modification: This electrical jumper allowed for the continued operation of the Reactor Building Zone 8 fire detection system following the removal of fire detector 8-5. This detector along with the conduits and electrical circuits therein must were removed to permit the removal of RC-P-1C. The jumper between the base of detector 8-4 to the base of 8-6 will provide circuit continuity. This kept the zone 8 detectors operable without a trouble or fire alarm at either FS-PNL-RB1 or at a remote panel in the Control Room.

Safety Evaluation Summary: This change provided for the continued use of the remaining five Zone 8 Reactor Building fire detectors. In addition, no trouble or fire alarms were activated that would preclude the identification of a problem or fire in the fire zone protected by these detectors. The short period of time that the zone was powered down to allow for disconnecting the existing circuit was covered by the compensatory measures of AP 1038 Exhibit 2, Section 1.3.2.1 with an hourly fire patrol.

Modification: Reactor Building Fire Tek Panel Temporary Modification (EJ 27)

Description of Modification: Removal of Reactor Building Fire Tek Detector 8-5 inside the "B" D Ring was required for access to remove RC-P-1C components. Jumper between detectors 8-4 and 8-6 allowed for continued operation of the remaining Zone 8 Fire Detectors.

Safety Evaluation Summary: This change provided for the continued use of the remaining five Zone 8 Reactor Building fire detectors. In addition, no trouble or fire alarms will be activated that would preclude the identification of a problem or fire in the fire zone protected by these detectors. The short period of time that the zone is powered down to allow for disconnecting the existing circuit was covered by the compensatory measures of AP 1038 Exhibit 2, Section 1.3.2.1 with an hourly fire patrol.

Modification: Reactor Building Fire Tek Panel Temporary Modification (EJ 28)

Description of Modification: Removal of Reactor Building Fire Tek Detector 8-5 inside the "B" D Ring was required for access to remove RC-P-1C components. Jumper between detectors 8-4 and 8-6 will allow for continued operation of the remaining Zone 8 Fire Detectors. Three jumpers are required.

Safety Evaluation Summary: Removal of Reactor Building Fire Tek Detector 8-5 inside the "B" D Ring was required for access to remove RC-P-1C components. Jumper between detectors 8-4 and 8-6 allowed for continued operation of the remaining Zone 8 Fire Detectors.

Modification: ESAS Bypass Jumper SF-P-1A (EJ 13)

Description of Modification: The purpose of this temporary modification was to maintain equipment required for shutdown operation while replacing an ESAS relay.

Safety Evaluation Summary: This change did not conflict with the requirements of the Technical Specifications because all action statements for ESAS require cold shutdown operation when portions of the system are rendered inoperable. The plant was in cold shutdown mode while the jumpers were installed. With the plant in cold shutdown, ESAS High Pressure Injection was bypassed, and Reactor Building isolation could be performed manually to maintain low-pressure containment closure.

Modification: ESAS Bypass Jumper SF-P-1B

Description of Modification: The purpose of this temporary modification is to maintain equipment required for shutdown operation while replacing an ESAS relay.

Safety Evaluation Summary: This change does not conflict with the requirements of the Technical Specifications because all action statements for ESAS require cold shutdown operation when portions of the system are rendered inoperable. The plant will be in cold shutdown mode while the jumpers are

installed. With the plant in cold shutdown, ESAS High Pressure Injection is bypassed, and Reactor Building isolation can be performed manually to maintain low-pressure containment closure.

Modification: 1C ESV MCC Unit 10EL Feed to AB-E (1C-ESV) Distribution Panel (EJ 30)

Description of Modification: The purpose of this temporary modification was to provide temporary power to 120/208 VAC Distribution Panel AB-E by energizing the upstream 480VAC 3Ø transformer. The normal feed at the 1C ES valves MCC is being de-energized for routine bus cleaning.

Safety Evaluation Summary: This temporary modification did not have the potential to adversely affect nuclear safety or safe plant operations because it allows equipment powered from the AB-E distribution panel to continue functioning during the time source power is unavailable from the 1C ES Valves MCC. During the 1C ESV MCC outage, the AB-E distribution panel will receive power from 1A ESV MKCC Unit 10 EL. A short power outage, while power is transferred, occurred at the beginning and end of the time when AB-E was on temporary power. Actions by Operations could preclude problems arising from the 1C ESV outage and the short periods of power loss to the AB-E distribution panel.

Modification: ESAS Bypass Jumper CA-V-189 (EJ 13)

Description of Modification: The purpose of this temporary modification was to maintain equipment required for shutdown operation while replacing an ESAS relay.

Safety Evaluation Summary: This change did not conflict with the requirements of the Technical Specifications because all action statements for ESAS require cold shutdown operation when portions of the system are rendered inoperable. The plant was in cold shutdown mode while the jumpers were installed. With the plant in cold shutdown, ESAS High Pressure Injection was bypassed, and Reactor Building isolation could be performed manually to maintain low-pressure containment closure.

Modification: ESAS Bypass Jumper AH-V-1A (EJ 14)

Description of Modification: The purpose of this temporary modification was to maintain equipment required for shutdown operation while replacing an ESAS relay.

Safety Evaluation Summary: This change did not conflict with the requirements of the Technical Specifications because all action statements for ESAS require cold shutdown operation when portions of the system were rendered inoperable. The plant was in cold shutdown mode while the jumpers are installed. With the plant in cold shutdown, ESAS High Pressure Injection is bypassed, and Reactor Building isolation could be performed manually to maintain low-pressure containment closure.

Modification: This change is to provide temporary Power to WDL-LT-119/115 (EJ 16, (EJ 30)

Description of Modification: This temporary modification provided temporary power to WDL-LT 119 plus 115 from normal receptacle to another receptacle located in the same cabinet.

Safety Evaluation Summary: The Electrical Jumper did not affect nuclear safety or safe plant operations because it allows recorder and indications for the Reactor Coolant Bleed Tanks, Auxiliary Sump, MWST, and RCDT to have power. This provided the Control Room with indication. For this reason this jumper

improved safety. This jumper did not change the facility or procedures as they are described in the safety analysis Report. The recorders WDL-LR-115 and 119 are fused and have a standard outlet plus for the power supply to the to the recorders they will receive power from the CWDS panel as they do now, just from a different terminal. The jumper did not qualify as a test or experiment. This change did not conflict with the Technical Specifications.

Modification: 1A Main Transformer Oil Pump and Fan Auto Circuit Lifting (LL 1 and 2)

Description of Modification: The purpose of this temporary modification was to de-energize 1A Main Transformer Pump and fan auto control circuit from winding temperature switches TH1, TH2, and TH3.

Safety Evaluation Summary: The temporary sparing of the 1A Main Transformer oil pump and fan circuit is never in use (circuit in manual) and it otherwise provides no function important to plant safety.

Modification: Temporary Lifting of Circuit AR 96A (LL 3)

Description of Modification: The purpose of the temporary modification is to allow temporary connection of a thermocouple for RC-P-1B seal no. 1 inlet temperature to the plant computer. Existing T/C, RC20-TE2 has failed at RC-P-1B.

Safety Evaluation Summary: The safety function of RC-P1B is to maintain integrity of reactor coolant system pressure boundary. There was no safety function that required indication of seal water temperature.

Modification: 1B Main Transformer Oil Pump and Fan Auto Circuit Lifting (LL 11 and LL 12)

Description of Modification: The purpose of this temporary modification was to de-energize 1B Main Transformer Pump and fan auto control circuit from winding temperature switches TH1, TH2, and TH3.

Safety Evaluation Summary: The temporary sparing of the 1A Main Transformer oil pump and fan circuit was never in use (circuit in manual) and it otherwise provides no function important to plant safety.

Modification: FPT-A Plant Interlock Defeat in 13R for Testing (LL 15)

Description of Modification: The purpose of this temporary modification was to disable plant interlock trip signals to the FPT to permit resetting of FPT during 13R outage for valve stroking and control system testing.

Safety Evaluation Summary: This temporary modification was used only during plant shutdown when the turbine was not being used to support plant operation. There was no possibility of this change having an adverse affect on plant safe operation or on equipment important to safe shutdown capability. There are no Technical Specifications related to the FPT control system.

Modification: FPT-B Plant Interlock Defeat in 13R for Testing (LL 16)

Description of Modification: The purpose of this temporary modification was to disable plant interlock trip signals to the FPT to permit resetting of FPT during 13R outage for valve stroking and control system testing.

Safety Evaluation Summary: This temporary modification was used only during plant shutdown when the turbine is not being used to support plant operation. There is no possibility of this change having an adverse affect on plant safe operation or on equipment important to safe shutdown capability. There are no Technical Specifications related to the FPT control system.

Modification: TMM to measure DH-C-1A/B tube side DP

Description of Modification: The purpose of this change was to install a temporary gauge that was isolated by isolation valves, which were a part of the standard system configuration.

Safety Evaluation Summary: This TMM would only be installed when the plant is at cold shutdown. There was no potential to adversely affect nuclear safety or safe plant operation. Failure of the gauge or fittings would result in a leak that could be isolated. This change did not violate or conflict with the applicable Technical Specification requirements.

Modification: Gland Steam Sea; Pressure Increase (TMM 1)

Description of Modification: This change provided the ability to manually control GS header pressure via GS-V-6 handwheel to a maximum of 12 psig per 1106-10, step 2.2.1 guidance. Recalibration of GS-PT-230 and scale changes on PI-230 are required.

Safety Evaluation Summary: This temporary modification did not adversely affect nuclear safety or safe plant operations because manual operation at a higher system pressure (12 psig maximum) was within system operating capability. System relief valves (GS-V-0011, 0012) could provide over-pressure protection. GS-V-0008 could provide automatic control to protect from under-pressure. GS-V-0005 could provide manual means of protection from under-pressure. GS-PS-0191 could provide a low-pressure alarm to alert the operators. This change did not conflict with the requirements of the Technical Specifications because there are no Technical Specifications related to the Gland Steam system.

Modification: DC-C-2B River Outlet Pressure (TMM 3)

Description of Modification: The purpose of this temporary modification was to install a temporary heat exchange outlet pressure instrument because the instrument line to DR-PI-121 was blocked. This instrument was used to calculate heat exchanger differential pressure during operation of the Decay Heat River Water system.

Safety Evaluation Summary: The same model pressure gauge was used on the river water outlet vent line as was existing downstream of DR-V-1003. A coupling was installed on the vent line as existed downstream of DR-V-1003. A coupling was installed on the vent line to accommodate the pressure gauge. This coupling was the same material as the existing system piping and could handle the cooler tube side design pressure of 75 psig and the design temperature of 195° F. Venting of the cooler is done to return the cooler to service following maintenance. Venting will not be necessary while this temporary modification is in effect. There were no seismic concerns. The gauge was mounted on a one-inch pipe versus a one half-inch pipe for the existing mounting. There was no FAHA impact as no combustibles

were being added. No new failure modes were being created because the temporary modification was only moving the pressure gauge from one tap to another.

Modification: MU-V-3 Air Pressure Booster (TMM 4)

Description of Modification: This temporary modification was to replace MU-V-3 Air Pressure Booster, which failed. This TMM removed the inlet oiler as recommended by the Booster manufacturer, installs an air reservoir at the booster inlet to improve the reliability, and replaced the inlet air regulator that failed.

Safety Evaluation Summary: This temporary modification did not adversely effect nuclear safety or safe plant operations. The operation of MU-V-3 was not changed. The mounting of the temporary air reservoir could appropriately minimize the possibility of creating a hazard to nearby equipment. The replacement air regulator was Nuclear Safety Related quality to achieve the most reliable control over maximum booster outlet pressure.

Modification: Festoon Cable for Polar Crane (TMM 6)

Description of Modification: The existing 36 conductor Festoon cable has been damaged and was replaced with 3 – 12 conductor cables.

Safety Evaluation Summary: This activity did not have the potential to adversely effect nuclear safety or safe plant operations. The polar crane is not a nuclear safety related component. New cables will perform the same function as the cable being replaced. There are no new interlocks or controls as a result of installing new cables. New cables are capable of carrying the same current as the existing cable.

Modification: Fire Watch Cameras 281' FH/AB (TMM 6, 9, and 10)

Description of Modification: This temporary modification installed cameras to provide for fire watches in the Fuel Handling and Auxiliary Buildings 281' elevation per CMR 93-037. To support TSI/Mecatiss upgrade activities the cameras may need to be temporarily relocated.

Safety Evaluation Summary: This change did not have the potential to adversely effect nuclear safety or safe plant operations. The cameras and associated cables did not serve a nuclear safety related function nor did they interface with any equipment that did. Safe plant operations were maintained since the cameras were used to support fire watches during Mecatiss installation. The cameras were not interlocked with any equipment used to operate the plant. This activity did not make changes in the facility as described in the safety analysis report. The mounting of the cameras did not result in an unanalyzed condition. The weight (0.77 lbs.) of the cameras is minimal and they are attached to non-safety related structures. If the cameras were to become a missile during a seismic event they would not impact any safety-related equipment. Camera installation will be walked down to assure that there are no seismic interactions. The cable installation shall be accomplished by ty-wrapping the coax cables to existing non-safety related conduits, cable trays and associated supports. The weight of the cable is about 0.039 lbs./foot, which is minimal.

Modification: HM-FI-3B and 4B Removal (TMM 7 and 8)

Description of Modification: This temporary modification replaced the flow indicators at the Cal Gas and Reagent Gas bottles for the "A" Post-LOCA hydrogen monitor with tubing, to alleviate a leakage problem that couldn't be resolved due to lack of parts.

Safety Evaluation Summary: This temporary modification temporarily resolved a leakage path from the Reactor Building to the environment until a permanent resolution could be implemented. Removal of these flow meters had no operational impact as they were not utilized, and not called out in any Operations or TSS procedure. Reagent and cal gas flow rates to the analyzer were actually obtained from HM-FIC-1 & 2, located in the analyzer panel. Installation of the tubing restored the Reactor Building pressure boundary, and since the pressure rating of the tubing was greater than that of the flow meters, there was no degradation of the pressure ratio of the system.

Modification: Cooling Water for CO-P-1C Packing (TMM 7)

Description of Modification: This temporary modification provided a source of cooling water from eyewash/shower station #5 to CO-P-1C packing, to provide auxiliary cooling while packing was ran in.

Safety Evaluation Summary: This temporary modification did not have the potential to adversely effect nuclear safety or safe plant operations. The change provided a source of cooling water to C)-P-1C new packing to allow cooling the packing while it was run in. Without the additional cooling, the packing may overheat and be damaged. The addition of cooling prevented possible damage to the packing, packing follower, and CO-P-1C shaft. The temporary modification enhanced plant safety.

Modification: 13R Trailer setup/removal Trailer 201 (bathroom) Domestic Water (TMM 8)

Description of Modification: The purpose of this temporary modification was to install domestic water and sewerage connections to a temporary trailer for the 13R outage.

Safety Evaluation Summary: This activity did not require revision of the system/component description in the FSAR or otherwise require revision of the Technical Specifications or any other part of the SAR because the connections were temporary and no permanent changes are being made to the systems. There are no 'technical Specifications associated with the system or activities controlled by this temporary modification. No tests or experiments were conducted which were not described in the FSAR, the Technical Specifications, or any part of the SAR because no tests or experiments were conducted by this change.

Modification: GSC -T-1 (TMM 10)

Description of Modification: The purpose of this temporary modification was to provide make-up water source for the GSC system during GSC-K-1 resin replacement. The Resin bed isolation valve Y19 had a 1-gpm leak that tended to drain water from the system during the resin replacement.

Safety Evaluation Summary: This activity did not require revision of the system/component description in the FSAR or otherwise require revision of the Technical Specifications or any other part of the SAR because the connections were temporary and no permanent changes were being made to the systems. There were no technical Specifications associated with the system or activities controlled by this temporary modification. No tests or experiments were conducted which were not described in the FSAR,

the Technical Specifications, or any part of the SAR because no tests or experiments were conducted by this change.

Modification: Provide Demineralized Water Source for FW Heater Leak Checks in 13R Outage (TMM 10)

Description of Modification: The purpose of this temporary modification was to install a valve manifold on DW-V-60 to utilize DW-P-3 during 13R as a source of demineralized water for FW heater leak checks and other miscellaneous uses as needed.

Safety Evaluation Summary: This activity did not require revision of the system/component description in the FSAR or otherwise require revision of the Technical Specifications or any other part of the SAR because the connections are temporary and no permanent changes are being made to the systems. There were no 'technical Specifications associated with the system or activities controlled by this temporary modification. No tests or experiments are conducted which are not described in the FSAR, the Technical Specifications, or any part of the SAR because no tests or experiments were conducted by this change.

Modification: DH-C-1B Shell Side Delta P (TMM 11)

Description of Modification: The purpose of this temporary modification is to install temporary gauges to measure DH-C-1B shell side differential pressure.

Safety Evaluation Summary: This activity did not require revision of the system/component description in the FSAR or otherwise require revision of the Technical Specifications or any other part of the SAR because the connections were temporary and no permanent changes were being made to the systems. There were no 'technical Specifications associated with the system or activities controlled by this temporary modification. No tests or experiments were conducted which were not described in the FSAR, the Technical Specifications, or any part of the SAR because no tests or experiments are conducted by this change.

Modification: Manual Valve Operator WDL-V-257 (TMM 13)

Description of Modification: The purpose of this temporary modification was to install a manual operator in place of the normally installed air operator on WDL-V-257. The purpose of the manual operator was to provide positive closure and containment while the leak in the discharge line to the river is repaired.

Safety Evaluation Summary: Implementation of this temporary modification did not adversely effect nuclear safety or safe plant operation because this TMM will provided for positive closure of the valve and positive administrative control to maintain the valve closed while the repairs to the discharge line to the river were made. Alternate methods and procedures were in place for handling and storing wastewater until repairs to the release line were completed.

Modification: Fix HD-V-3A/B at about 60% Open (TMM 14)

Description of Modification: The purpose of this temporary modification was to install a clamshell both above and below the stem coupling on HD-V-3A. First, one valve was blocked and repaired, then the

other valve was blocked and repaired. The clamshells prevented the blocked valve from fully opening. They will only allow about 15% valve travel.

Safety Evaluation Summary: This TMM did not have the potential to adversely effect nuclear safety or safe plant operation. This TMM was being installed on QA "Other" components and did not impact any component function associated with nuclear safety. Sufficient controls were in place such that this TMM did not effect safe plant operations. Even if the TMM failed or if it prevented control of HD-T-1 normal levels, automatic systems were available to control tank level and protect the HD pump from low tank level.

Modification: Bypass AH-AV-11 to Open AH-D-3 (TMM 14)

Description of Modification: This temporary modification bypassed the static pressure control for the Auxiliary Building supply damper. Instead of attempting to control the damper position based on building differential pressure, the damper remained fully open until the new 3-way valve is delivered to the TMI warehouse and installed (at that time the TMM will be removed).

Safety Evaluation Summary: The damper (AH-D-3) is always fully opened (based on ventilation inspections over the past 6 years by the System Engineer). Therefore, this modification had no operational impact. Pressure in the supply duct would only rise if the exhaust fans for the building tripped or shut down. If this happened, there are existing interlocks that also trip the Auxiliary and Fuel Handling Building supply fans. So there is little need for static pressure control on the supply fans for the as-installed system and building configuration. This was being considered by engineering so that static pressure control for the supply ventilation may be removed at a later date with a permanent modification. Therefore, this temporary modification did not adversely effect nuclear or safe plant operations because ventilation system operations remained unchanged.

Modification: Service Air Supply to Turbine Deck for 13R (TMM 14)

Description of Modification: The purpose of this temporary modification was to provide increased Service Air capacity on the turbine deck during 13R outage to support turbine inspection work.

Safety Evaluation Summary: The Service Air system was classified as "Other" and was not required to support safe shutdown capability or safe continued operation of the plant. The TMM was primarily used during the 13R outage when the plant was already shutdown. There were no tests or experiments being conducted by this TMM and there were no Technical Specifications related to the Service Air system.

Modification: Cooling Water for HP Turbine Stud Induction Heating Machines (TMM 15)

Description of Modification: The purpose of this TMM was to provide a source of water to cool the induction heating machines used in 13R for detensioning and retensioning the HP Turbine shell horizontal joint bolting.

Safety Evaluation Summary: The DW system is classified as "Other" and is not required to support safe shutdown capability or safe continued operation of the plant. The TMM was primarily used during the 13R outage when the plant was already shutdown.

Modification: FPT-A GS Pressure Control (TMM 16)

Description of Modification: The Purpose of this temporary modification was to provide pressure indication to FPT-A. GTS-V-2A will be manually throttled to maintain 2.5 to 4.5 psig reduced GS pressure in an effort to minimize steam leakage from the inboard shaft seal of FPT-A. Leakage was effecting oil system quality.

Safety Evaluation Summary: FPT-A GS system will remain operational with nominal rated pressure and existing low pressure alarms remain functional to flag any decrease of pressure. No tests or experiments are introduced in this TMM. This TMM did not effect any part of the SAR.

Modification: Clamp Open Manual Balance Damper Upstream of AH-D-39 (TMM 17)

Description of Modification: This modification installed a section of All-Thread into the Control Building Air Intake duct at the manual-balancing damper 2 feet upstream of the air intake damper (AH-D-39). This All-Thread was adjusted to allow the manual-balancing damper to be secured in a throttled position. The damper was in a condition where the blades could not be secured in any position, and tended to fail in the closed position. The closed position did not allow the required amount of outside air to be supplied to the Control Building.

Safety Evaluation Summary: This temporary modification did not have the potential to adversely effect nuclear safety or safe plant operations because it secures the manual balancing damper to its required position. The required position allowed the Control Building Emergency Envelope to be pressurized, and keep the Control Room at greater than 0.1 inch w.g. positive with respect to the stairwell as required by FSAR Section 7.4.5.

Modification: Provide Filtered Water from the Altitude Tank (TMM 17)

Description of Modification: This temporary Mechanical Modification provided an alternate flow path for filtered water from the Altitude Tank (FS-T-1). The alternate flow path was necessary during piping repairs on the Filtered Water line between the Altitude Tank and the Turbine Building.

Safety Evaluation Summary: This TMM did not effect the ability to continue the required functions. There was no equipment supporting the safe operation or shutdown of the plant, or equipment for nuclear safety purposes, in the vicinity of the TMM. Therefore, the potential failure effects did not have the potential to adversely affect nuclear safety or safe plant operation.

Modification: Reroute WT-LT-228 Vent to Acid Tank (TMM 17)

Description of Modification: The purpose of this temporary modification was to tie the CW Acid Tank Level Instrument vent into the tank gas space. This will allow the instrument to read the correct level regardless of any overpressure or gas space vacuum.

Safety Evaluation Summary: Since the line was not be connected to the liquid filled portion of the tank, the chance of a spill did not exist and therefore, there was no potential for any non-nuclear environmental concern. Neither the configuration nor operation of the instrument was discussed in the Technical Specifications; therefore, no conflict with that document existed.

Modification: BWST Sample Point (TMM 18)

Description of Modification: This temporary mechanical modification provided the ability to sample the BWST without cross-contaminating the sample while minimizing the possibility of spreading contamination to the floor from radioactive liquids.

Safety Evaluation Summary: The evaluation of the temporary mechanical modification found the addition of this sample valve in no way affects the ability of the Decay Heat System to mitigate design bases events or to provide for safe shutdown of the plant. Safe plant operations or nuclear safety were not affected.

Modification: Precoat Filter Effluent Sample Point (TMM 20)

Description of Modification: This temporary mechanical modification provided the ability to sample the Precoat Filter effluent without cross-contaminating the sample while minimizing the possibility of spreading contamination to the floor from radioactive liquids.

Safety Evaluation Summary: An evaluation showed that this temporary mechanical modification provided the ability to sample the Precoat Filter effluent without cross-contaminating the sample while minimizing the possibility of spreading contamination to the floor from radioactive liquids. The addition of this sample valve in no way affected the ability of the Precoat Filter to provide cleanup capabilities. Safe plant operations or nuclear safety were not affected.

Modification: Bulk N2 to Secondary Side N2 Header (TMM 21)

Description of Modification: The purpose of this temporary mechanical modification was to provide a source of bulk N2 from liquid N2 high pressure supply to secondary side N2 header for use in 13R outage.

Safety Evaluation Summary: An evaluation showed that the temporary mechanical modification only changed the source of the nitrogen from a tube truck to the installed liquid/high pressure bank system. The Technical Specifications do not address the use of nitrogen for blanketing.

Modification: Temporary Air for Reactor Building Services (TMM 23)

Description of Modification: The purpose of this temporary mechanical modification was to connect the diesel driven air compressors supplied by a vendor to existing CC piping at a point upstream of CC-V-173.

Safety Evaluation Summary: An evaluation showed that this temporary mechanical modification used normally installed piping to penetrate the reactor building containment envelope. Therefore the Reactor Building containment was maintained as required. Also no new tests or experiments, which were not described in the SAR, were conducted.

Modification: Temporary RC-P-1B Seal #1 Inlet Temperature (TMM 26)

Description of Modification: This temporary mechanical modification installed a thermocouple on the make-up pipe upstream of MU-V-33B to measure RC-P-1B seal #1 inlet temperature. The original thermocouple, RC20-TE2 failed and could be repaired until the 13R outage.

Safety Evaluation Summary: An evaluation showed that this change did not have the potential to adversely affect nuclear safety or safe plant operations. RC-P-1B seal #1 temperature indication was not used to maintain nuclear safety. Safe operation of the reactor coolant pump was maintained by reestablishing indication of the seal inlet temperature.

Modification: Low Range N2 Gauge (TMM 36)

Description of Modification: This temporary mechanical modification installed a 0 to 10 psig gauge downstream of NI-V-245, to more accurately monitor the 2 to 4 psig N2 blanket for the OTSG's during the 13R outage.

Safety Evaluation Summary: An evaluation showed that this temporary mechanical modification did not have the potential to adversely affect nuclear safety of safe plant operations, since the materials used in the change were sufficient to withstand the normal nitrogen system pressure, with the exception of the 0 to 10 psig gauge. The gauge remained isolated until the nitrogen pressure was established at the blanket pressure of 2 to 4 psig. The materials used (carbon steel and brass) are compatible with the nitrogen system design and with nitrogen.

Modification: Nitrogen Supply for Condensate Dissolved Oxygen Control (TMM 53)

Description of Modification: The purpose of this temporary mechanical modification was to supply two paths for nitrogen injection into the main condenser. The source of nitrogen was NI-V-S. The injection points were HV-V-60 (10B feedwater vent) and secondary sample point CE-22 (Main Condenser "A" hot compartment tubesheet sample). Injection flow was approximately 20 CFM (10 CFM per injection path). This maintained secondary dissolved oxygen less than 10 parts per billion.

Safety Evaluation Summary: An evaluation showed that there was no adverse affect on nuclear safety or safe plant operations. The change did not make any changes to equipment or procedures described in any part of the SAR and did not conduct any new tests or experiments described in the SAR.

Modification: Install Pipe Caps on Reactor Building side of CM-V-1 and 4 (penetration 108) (TMM 56 and 57)

Description of Modification: This change provided tubing caps on the Reactor Building side of the penetration upstream of CM-V-1 and 4. This was a temporary modification to insure containment integrity while repairing CM-V-1, 2, 3, and 4.

Safety Evaluation Summary: An evaluation showed that this temporary mechanical modification did not involve an increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated and did not involve a decrease in the probability of the margin of safety; did not create the possibility of an accident or malfunction of equipment important to safety not previously evaluated and did not reduce the margin of safety defined in the basis of any technical specification. No unreviewed safety question was found to exist.