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April 16, 1996

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

Dear Sir:

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 1994 and 1995

In accordance with the requirements of 10 CFR 50.59, enclosed is the report containing brief descriptions of changes, tests and experiments, including summaries of the respective safety evaluations of each, which were completed during the period of January 1994 through December 1995.

Sincerely,

J. Knubel
Vice President & Director, TMI

WGH

Attachment

cc: Administrator, Region I
TMI-1 Senior Project Manager
TMI Senior Resident Inspector

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Changes completed from January 1994 through December 1995
in accordance with 10 CFR 50.59

I. Tests, Experiments, Procedure and Document Changes

Procedure: 1001A Procedure Review and Approval (PCR 1-MD-95-0008)

Description of Change: Revision to the procedure included the following: elimination of the position Manager, Plant Maintenance with assignment of responsibilities to Plant Maintenance Director; distribution of TCNs by Operations; transfer of directions for handling Job Order Written Procedures from 1407-1 to 1001A, para. 4.5 and the elimination of the Manager, Plant Maintenance Assessment position.

Safety Evaluation Summary: Realignment of the organization and administrative duties was evaluated and determined to have no adverse impact on nuclear safety, safe plant operations, and involve no Unreviewed Safety Question.

Procedure: 1001D Procedure Preparation (PCR 1-MD-94-0018)

Description of Change: The procedure revision was made to include procedures which were previously under the responsibility and control of the Site Services Department (Services) into the scope of TMI-1 Division. The changes were necessary because transition into PDMS at TMI-2 and integration of the Site Services Department into the TMI-1 Division. Appropriate groups within the TMI-1 Division have become the responsible offices formerly overseen by Services. Where controls were redundant, Services controls were replaced with existing TMI-1 Division controls. The degree of control for required activities and programs remains the same.

Safety Evaluation Summary: The change was evaluated and determined not to involve an Unreviewed Safety Question.

Procedure: 1009 TMI Organization (PCR 1-MD-94-0019 and
PCR 1-MD-95-0014)

Description of Change: Paragraph 12.1 of the TMI-1 FSAR describes the role and responsibilities of organizations. Those roles and responsibilities were changed as a result of changes to the GPUN organization. The following changes were made as a result of the first PCR:

- 1) the Site Services Department was eliminated and the activities it performed were appropriately included with those of the TMI-1 Division. The Manager, Construction Management/Facilities and Planning Manager positions will report to the TMI-1 Division;
- 2) the Manager, Plant Maintenance and the Technical Specification Surveillance/ISI Coordinator positions were eliminated and the responsibilities reassigned;
- 3) Nuclear Assurance Division (NA) QA/QC has been modified to retain Nuclear Safety Assessment and Audits in NA and QC activities have been transitioned to Quality Verification activities under the control of the Maintenance Department.

Additional modification of roles and responsibilities came from the second PCR. These resulted from the transition from TMI-1 to TMI. Technical Specification Amendment 179 approved this change which brought TMI-2 PDMS activities under the direction of TMI-1. There was no decrease in the scope of activities or the level of support provided as a result of the changes.

Safety Evaluation Summary: The organizational changes described above were made as a result of senior GPUN management discussion and decisions. Realignment of the organization was evaluated and determined to have no adverse impact on nuclear safety and involve no Unreviewed Safety Question.

Procedure: 1035 Control of Transient Combustible Material
(PCR 1-95-0009)

Description of Change: The procedure was revised to reflect the increased fire loading in Fire Zone 3 of the Intake Screen Pump House as a result of moving Operations' Lubrication Locker (SH1) inside the building seasonally to avoid cold weather affects on grease.

Safety Evaluation Summary: The revision to the procedure found the transient combustible loading to be well within that allowable as analyzed in the Fire Hazards Analysis Report. It has no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and thus no Unreviewed Safety Question was involved.

Procedure: 1038 Administrative Controls Fire Protection Program
(PCR 1-EG-95-0020 and PCR 1-EG-95-0024)

Description of Change: The procedure as revised by the first PCR accomplished the following: resolved Audit Finding 94-12-02 concerning preventive maintenance schedules; updated and made miscellaneous changes to the Organization Chart; allows fire brigade members credit for TMI-2 drill participation; revised the detection surveillance schedule per the NFPA Code; added emergency lighting to Exhibit 2 and updated reference lists throughout the document.

The second PCR resolved confusing run times based on the TMI-1 Technical Specifications (TS), TMI-2 TS, National Fire Codes and Insurance Standards. Based on the successful performance of past tests, the insurance carrier is aware of, has periodically reviewed and accepted the monthly testing program criteria. Run times of 10 min/wk for electric pumps and 30 min/wk for diesel driven pumps have been established.

Safety Evaluation Summary: Evaluations of the procedure as revised found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision and thus no Unreviewed Safety Question was involved.

Procedure: 1070 TMI-1 Maintenance Plan (PCR 1-MT-95-0006 and
PCR 1-MT-95-0007)

Description of Change: Initially the procedure was revised to reflect changes to the responsibilities and organization resulting from GPU Nuclear management discussions and decisions regarding the combination of Site Services with the TMI-1 Division. It was found that despite the shift in reporting structure, there was no reduction in the level of support for maintenance planning.

The second change incorporated Maintenance identified revisions; further revised and/or updated the references, organizational titles, and relocation of the "Be Sure" process documentation and finally revise various "shall" statements to "should" statements. The deletion of the term "Life of System Maintenance Plant" did not reflect any true reduction in the level of support since the functions continue to be performed. The changing of "shall" to "should" statements similarly does not reflect any reduction in the level of support. It identifies the true intent of management expectation.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and thus no Unreviewed Safety Question was involved.

Procedure: 1077 Material Nonconformance Reports and Receipt Deficiency Notices (1-MT-94-9018)

Description of Change: Revision 7 of the GPUN Operational Quality Assurance Plan modified the structure of the GPUN QA Department. As a result of the change, both QC and Procurement QA report to the TMI-1 Division. The program for identifying, evaluating and correcting MNCRs and RDNs will be administered by the organization personnel reporting to the TMI-1 Division. To accomplish this, the procedural controls previously defined by a QA procedure have been incorporated into a new TMI-1 Maintenance Department procedure.

Safety Evaluation Summary: An evaluation found that the transfer of previous procedure controls to the new procedure does not constitute an Unreviewed Safety Question.

Procedure: 1101-1 Plant Limits and Precautions (1-OS-94-0469)

Description of Change: Based on information provided by IEN 88-23, an evaluation was performed to assure that the normal operating pressures on the borated water storage tank (BWST) and the makeup tank (TMUT) are not such that the potential for gas binding of the high pressure injection pumps would occur when both the BWST and MUT are lined up as parallel suction sources. As a result of that evaluation and the objective of avoiding additional operator action during a LBLOCA, the maximum MUT pressure versus level was revised and a curve developed to provide operators instructions for maintaining gas pressure.

Safety Evaluation Summary: Evaluation of the procedure revision found that the probability of occurrence or consequence 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 from the procedure revision.

Procedure: 1101-1 Plant Limits and Precautions (PCR 1-OS-95-0326)

Description of Change: The procedure as revised reduced the minimum allowable Core Flood Tank operating temperature to 70°F and the minimum allowable Core Flood Tank Nitrogen nozzle temperature to 40°F. Ductility of the tank material remains assured following the change since the tanks are not subject to cyclic or shock loading or temperature transients, the tank material meets or exceeds the impact test criteria for Section VIII Division 2 vessels at 70°F, the tanks were hydro tested to 1050 psig at 70°F, nondestructive examinations before and after the hydro tests showed no defects and fracture mechanics analysis shows that if the material is brittle, it will not fail.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1101-2.1 Radiation Monitoring Setpoints (PCR 1-RC-94-0012 and 1-RC-95-0028)

Description of Change: The first procedure revision changed the prescribed sensitivity of Radiation Monitor (RM) L-6 based on the isotopic recalibration of the monitor. Victoreen, the equipment manufacturer provided the calibration data and the justification for changing the channel sensitivity. The information was evaluated by Radiological Engineering and found that changing the calibration source and source data did not adversely affect the function or performance of the monitor channel. As a result of the change, more accurate results will be provided by the monitor.

The second revision accomplished the following: correctly identified the flow rate for RM-A-2 as 2 CFM; identified an alert setpoint which provided sufficient warning prior to reaching the high alarm setpoint and established proper sensitivity for the RM-I-18 Iodine channel in accordance with EER 95-0038.

Safety Evaluation Summary: The procedure change resulted in increased monitor accuracy. There was no increased possibility or consequence of accident or malfunction identified. And no new accident or malfunction was created by the change. No Unreviewed Safety Question was found to be associated with revision of the procedure.

Procedure: 1101-3 Containment Integrity and Access (PCR 1-OS-94-0305 & TCN 1-94-0052)

Description of Change: Modifications to the Penetration Pressurization (PP) System required revision of the procedure delineating system operation. The modified system required the procedure provide means for normal operation of the system with no automatic functions, permanent disconnection from the PP system of welded containment leakage boundaries and piping interconnections between the mechanical and electrical PP sub-systems and permanent conversion of the ES pressurization valves on the Personnel and Equipment access hatches to supply only the hatch interspace.

As modified, the PP system is a non-safety-related air/nitrogen supply system that is not assumed to be operable post-accident. It will facilitate the periodic leak testing required by TS. The new interconnection configurations with safety-related systems/components will assure that integrity both the normal function and post-accident containment integrity are maintained.

Safety Evaluation Summary: For the reasons identified above, evaluation of the procedure revision associated with the described modification found no Unreviewed Safety Question to be associated with the revised procedure.

Procedure: 1101-3 Containment Integrity and Access Limits (PCR 1-OS-95-0136)

Description of Procedure: The revised procedure provides better definition of the containment closures that need to be tracked and recorded on Enclosure 4 to the procedure when containment closure is required by the Outage Fuel Protection Criteria.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1102-2 Plant Setpoints (PCR 1-OS-95-327)

Description of Change: The procedure was revised to change the setpoint for the low temperature Core Flood Tank (CFT) alarm points L2719 and L2720 to 75°F. The change came as a result of the operational and maintenance burden

imposed by the CFT heaters. The self imposed NDT+30°F minimum temperature requirement which was previously met was reevaluated and a minimum operating temperature for the CFTs of 70°F and 40°F for the nitrogen injection nozzles were determined not to affect plant safety. Ductility of the tank material remains assured following the change since the tanks are not subject to cyclic or shock loading or temperature transients, the tank material meets or exceeds the impact test criteria for Section VIII Division 2 vessels at 70°F, the tanks were hydro tested to 1050 psig at 70°F, nondestructive examinations before and after the hydro tests showed no defects, and fracture mechanics analysis shows that if the material is brittle, it will not fail.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1102-11 Plant Cooldown (PCR 1-OS-95-0137 and 1-OS-95-0178)

Description of Procedure: The procedure as revised permits the control room team to identify when to implement requirements set in the Outage Fuel Protection Criteria and Appendix I of 1104-4. Implementation of the requirements at the appropriate time positively affects nuclear safety and safe plant operation. Increased attention is placed on work which poses a higher risk. The second PCR revised the wording of a "caution" to read the same as a "note" to eliminate conflicting wording.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revisions. No Unreviewed Safety Question resulted from the revisions.

Procedure: 1102-14 RB Purge and Venting (TCN 1-95-0072)

Description of Change: The temporary procedure revision allowed local temperature monitoring at the component of concern (a principal load carrying component of ferritic material exposed to the external environment), the AH-V-1D valve body, and lower heater setpoints so that a meaningful reduction in the Reactor Building ambient air temperature could be attained without jeopardizing the integrity of the valve. The exterior of the purge valves is subject to temperature ranging from 40°F to 140°F. The procedure identifies 60° as the NDTT for the valves. Maintaining the valve body temperature ≥60°F during Reactor Building purging operations with reduced heater setpoints provides practical Reactor Building temperature reduction for personnel safety.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1103-5 Pressurizer Operation (1-OS-94-0289)

Description of Change: The procedure was revised to include limits and precautions, personnel safety, prerequisites and procedural steps to direct the manual lever exercise of the Pressurizer Code Safety Valves (PCSV). Manually lifting the valve stem with the lever several times within the first 24 hours of leak detection was evaluated. Based on the experience of the component manufacturer and valve inspection results, the action would sufficiently increase flow past the valve seat to remove debris preventing it from reseating and correct slight misalignment.

Operation of the manual lever is an action accounted for in the design of the valve and will not alter the valve physically or change the relief setpoint. Full discharge from a PCSV will be adequately quenched by the reactor coolant drain tank for 80 seconds before the tank's rupture disk is blown out. Performing the action with the reactor at hot shutdown, with an extension lever and stem lift limiting gag bolt would not adversely affect nuclear safety or safe plant operations. The reduced system pressure does not provide enough force to allow the valve to go into full lift and assures sufficient spring closure force to immediately close the valve upon release of the manual lever without allowing significant discharge from the PCSV. Potential accidents and malfunctions associated with the activity are within the bounds of previously evaluated scenarios. The margin of safety will not be reduced since one PCSV will remain fully operable and capable of relieving RCS pressure in accordance with TS 3.1.1.3.b.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1103-15A Shutdown Margin and Reactivity Balance
(PCR 1-OS-95-0087)

Description of Procedure: The procedure was revised to incorporate Boron-10 depletion in reactivity calculations and incorporate the lessons learned from operator training classes. The potential use of a non-conservative actual Xe worth value in post trip calculations was averted by replacing it with a conservative Xe value. B&W guidelines and provides a more accurate accounting of boron worth in relation to actual plant operating conditions over cycle life. Reactivity worth curves are more accurate when based on actual plant conditions than those based on empirical assumptions. No changes to boron measurement uncertainties were made to the procedure, thereby, ensuring continued conservative reactivity management.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1103-15B Estimated Critical Conditions (PCR 1-OS-95-0088)

Description of Procedure: The procedure was revised to incorporate Boron-10 depletion in reactivity calculations, correct typos and clarify curve IA through use of a legend. Approved B&W and GPU Nuclear guidelines and calculations were used to generate the reactivity curves. Reactivity management is unchanged except that boron-10 depletion calculations are more accurate than those based on empirical assumptions. Shutdown margin requirements and reactivity anomaly response are also unchanged as a result of the revision.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1104-1 Core Flooding System (PCR 1-OS-95-329)

Description of Change: The procedure was revised to reduce the minimum allowable Core Flood Tank (CFT) operating temperature to 70°F. The change came as a result of the operational and maintenance burden imposed by the CFT heaters. The CFT heaters also add unnecessary heat to the Reactor Building.

System operation was reevaluated and a minimum operating temperature for the CFTs of 70°F and 40°F for the nitrogen injection nozzles were determined not to affect plant safety. Ductility of the tank material remains assured following the change since the tanks are not subject to cyclic or shock loading or temperature transients, the tank material meets or exceeds the impact test criteria for Section VIII Division 2 vessels at 70°F, the tanks were hydro tested to 1050 psig at 70°F, nondestructive examinations before and after the hydro tests showed no defects and fracture mechanics analysis shows that if the material is brittle, it will not fail.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1104-3 Condensate Chemical Feed (PCR 1-OS-95-0108)

Description of Change: The procedure as revised provided direction for the slug feeding of treatment chemicals at the condensate pump suction, with the condensate pump running and with vacuum established.

Safety Evaluation Summary: Based on previous safety evaluations which found acceptable the use of Morpholine feedwater chemistry and use of alternative amines in the secondary system additions by the specified method was found preferable due to the smaller addition volumes involved. An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1104-4 Decay Heat Removal System (PCR 1-OS-95-0381)

Description of Procedure: The procedure as revised incorporates a checklist to be used by the control room team to implement the Outage Fuel Protection Criteria defense in depth concept. Use of the checklist helps manage risk during plant shutdown by keeping equipment failures and personnel errors from becoming events. It positively affects nuclear safety and safe plant operation. Increased attention is placed on work which poses a higher risk.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revisions. No Unreviewed Safety Question resulted from the revisions.

Procedure: 1104-21 Penetration Pressurization System (PCR 1-OS-94-0290, TCN 1-94-0052, TCN 1-94-0087 & PCR 1-OS-94-0688)

Description of Change: Modifications to the Penetration Pressurization (PP) System required revision of the procedure delineating system operation. The modified system required the procedure provide means for normal operation of the system with no automatic functions, permanent disconnection from the PP system of welded containment leakage boundaries and piping interconnections between the mechanical and electrical PP sub-systems and permanent conversion of the ES pressurization valves on the Personnel and Equipment access hatches to supply only the hatch interspace.

As modified, the PP system is a non-safety-related air/nitrogen supply system that is not assumed to be operable post-accident. It will facilitate the periodic leak testing required by TS. The new interconnection configurations

with safety-related systems/components will assure that integrity both the normal function and post-accident containment integrity are maintained.

Safety Evaluation Summary: For the reasons identified above, evaluation of the procedure revision associated with the described modification found no Unreviewed Safety Question to be associated with the revised procedure.

Procedure: 1104-25 Instrument and Controls Air System
(PCR 1-OS-94-0360)

Description of Change: Modifications to the Penetration Pressurization (PP) System required revision of the procedure delineating Instrument Air (IA) system operation. The modified system required the procedure provide the means for normal operation of the IA system with the PP non-safety grade air supply permanently disconnected from the N2/Seismic 1 IA piping.

Safety Evaluation Summary: Evaluation of the procedure revision associated with the described modification found no Unreviewed Safety Question to be associated with the revised procedure.

Procedure: 1104-28A Radioactive Waste Solidification - SEG
(PCR 1-OS-94-0478)

Description of Change: The procedural change allows use of the solid waste disposal system to prepare and transfer radioactive liquid material shipments (evaporator concentrates from the TMI-1 Miscellaneous Waste Evaporator in a liquid form to a liner) to a contractor for processing and undergo volume reduction. The waste solidification system was not changed by the revision. The process was changed by elimination of the solidification activity. An overall volume reduction of 8 to 1 will result from the activity instead of the 50 to 100% increase previously experienced with the solidified concrete process. The liquid shipments are designated LSA and the total curies shipped are a small fraction of the 49 CFR 173.435.A2 limits for the radionuclides involved. Potential accidental release is minimized by the use of a primary liner sealed within a secondary containment. Calculations found that the effects of an accidental spill of liquid concentrate on-site or off-site are well below 10 CFR 20 and the TS off-site dose limits. Spills occurring during the liner filling operations would be contained within the process building. No new or different type accident results from the change and the effects of a postulated spill are bounded by existing TMI-1 10 CFR 100 analyses. No margin of safety exists for processing solid radwaste.

Safety Evaluation Summary: The revision of the procedure as identified above was evaluated. It was found that the activity permitted by the revision involved no Unreviewed Safety Question.

Procedure: 1104-29H Transfers and Evaporation of Water from the Miscellaneous Waste Storage Tank (PCR 1-OS-95-0546)

Description of Change: The procedure change allowed the transfer of radioactive waste water from the TMI-1 Miscellaneous Waste Storage Tank to the TMI-2 Miscellaneous Waste Holdup Tank and/or the Chemical Cleaning Tank 1 to make a larger storage inventory available for use.

Safety Evaluation Summary: The revision of the procedure as identified above was evaluated. The activity involved only the radwaste treatment systems and had no impact on the operation of the nuclear power portion of the plant. Special consideration was given to the evaluation of gas concentration prior to the transfer of water to the TMI-2 Miscellaneous Waste Holdup Tank. The concern does not exist for the Chemical Cleaning Tank since the building in which it is housed is provided with an operational ventilation system. The radwaste systems of the unit were connected by design and the transfer addressed is within the design features of the radwaste system. It was found

that the activity permitted by the procedure change involved no Unreviewed Safety Question .

Procedure: 1104-29L Primary Neutralizer Tank Processes (TCN 1-95-0063 and PCR 1-OS-95-0726)

Description of Change: The temporary procedure change allowed the transfer of radioactive waste water from the TMI-1 Neutralized Waste Storage Tank to the TMI-2 Miscellaneous Waste Holdup Tank to make a larger storage inventory available for use. The PCR permanently incorporated the same changes.

Safety Evaluation Summary: The revisions to the procedure as identified above were evaluated. The activity involved only the radwaste treatment systems and had no impact on the operation of the nuclear power portion of the plant. Special consideration was given to the evaluation of gas concentration prior to the transfer of water to TMI-2. The radwaste systems of the unit were connected by design and the transfer addressed is within the design features of the radwaste system. It was found that the activity permitted by the procedure temporary change involved no Unreviewed Safety Question .

Procedure: 1104-29S Transfers from the Waste Evaporator Condensate Storage Tanks (TCN 1-95-0064)

Description of Change: The temporary procedure change allowed the transfer of radioactive waste water from the TMI-1 Waste Evaporator Condensate Tanks to the TMI-2 Miscellaneous Waste Holdup Tank to make a larger storage inventory available for use.

Safety Evaluation Summary: The revision of the procedure as identified above was evaluated. The activity involved only the radwaste treatment systems and had no impact on the operation of the nuclear power portion of the plant. Special consideration was given to the evaluation of gas concentration prior to the transfer of water to TMI-2. The radwaste systems of the unit were connected by design and the transfer addressed is within the design features of the radwaste system. It was found that the activity permitted by the procedure temporary change involved no Unreviewed Safety Question .

Procedure: 1104-42 Station Service Air (PCR 1-OS-94-0307)

Description of Change: Modifications to the Penetration Pressurization (PP) System required revision of the procedure delineating Service Air (SA) system operation. The modified system required the procedure provide the means for normal operation of the SA system with the PP non-safety grade air supply permanently disconnected from the N2/Seismic 1 SA piping.

Safety Evaluation Summary: Evaluation of the procedure revision associated with the described modification found no Unreviewed Safety Question to be associated with the revised procedure.

Procedure: 1105-22 Unit 1 Response to Unit 2 PDMS Alarms (PCR 1-OS-95-0008)

Description of Change: The Unit 2 alarm response procedure was revised due to the replacement of the PING RMS unit at ALC-RMI-18, due to its poor maintenance history, with a portable Victoreen unit. Alert alarm setpoints and alarm setpoints were specified for the replacement monitor, possible causes for an alert alarm at the 18.D5 Unit 2 Control Room Alarm were identified and revised manual actions required for an alert alarm were specified in Exhibit 2-94.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1106-1 Turbine Generator (PCR 1-OS-95-0283)

Description of Change: The procedure was revised due to the installation of the digital control system during 11R. This involves verification of voltage regulator response, pre-sync electrical protection of the generator and showing the URAL limit on the generator capability curve. The changes assumed that generator operation would be in accordance with the design requirements and system analysis. Additionally, administrative changes were made which were unrelated to the digital control system but resulted in a simplification of the procedure. These changes reflect current practice and/or do not affect routine operation or shutdown capability. Individually and collectively, the changes have no negative affect on existing capabilities or safety features of the turbine.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1202-13 Plant Response to Penetration of the Protected Area (1-OS-94-0407)

Description of Change: The revision to 1202-13, Plant Response to the Penetration of the Protected Area moved the focus of the procedure to the design basis threat and addresses the Operations course of action. A threat to nuclear safety exists when a hostile armed intruder enters the protected area. The operations response is designed to prevent LOCA and provide for early shutdown with increased inventory in the primary and secondary to delay the time to a core damage event and to allow time for maintenance activities and creative strategies. The procedure change also eliminated the need to make a decision to trip the reactor. In the specific case of an armed intrusion, the reactor is tripped (for other events, the Shift Supervisor uses the procedure to determine whether to maintain operation, trip the plant or commence plant shutdown based on the SRO's best judgement). The action assumes that the reactor can be shutdown given any unusual interaction.

Safety Evaluation Summary: The revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1202-30 Earthquake (PCR 1-OS-95-0301)

Description of Change: The procedure was revised to provide emergency response instructions for the new seismic instrumentation. The new equipment take advantage of the spectral analysis method of seismic events to determine if TMI's OBE spectral curve (frequency vs. g) was exceeded. As a result of the EPRI change in OBE setpoint, the criterion for each of the three EAL's was slightly changed but the response to each of the EALs was not reduced. No overhead alarm is associated with the SSE condition, however an appendix was added to aid Operations in determining if the EPRI criterion for SSE was exceeded.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident

either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1203-5 High Contaminants in the Condensate and/or Feedwater System (TCN 1-95-0134)

Description of Change: The temporary change to the procedure allows flexibility to allow exceeding a previously established limit for sodium provided the sodium source is known, it is a finite contaminate volume that is being successfully cleaned up and a waiver is agreed to by specified groups. The change precluded the possible need to take the plant to a hot shutdown condition on a general industry limit.

Safety Evaluation Summary: Evaluation of the procedure revision found that a review of the operational situation by the appropriate technical staff versus the shutdown of the plant would enhance nuclear safety and safe plant operation. It was also found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1210-6 Small Break LOCA Cooldown (PCR 1-OS-94-0141)

Description of Change: The procedure change describes actions to be taken by operators to prevent post LOCA boron precipitation and also alerts operators to the HPI/LPI flow instrument cutout phenomena caused by the square root converters. The reverse flow path through the core during a cold leg LBLOCA was considered as the potential means for boron precipitation and methods were initiated inhibit entry into conditions where boron concentration exceeds the solubility limit. Full modeling reactor flow identified a previously uncredited flow path through hot leg nozzle gaps. These were considered and later verified by analysis of the as-built gaps by B&W NSSS to provide sufficient natural circulation within the reactor vessel to prevent boron precipitation. The passive method of post-LOCA boron dilution as a replacement for hot leg injection dilution was reflected in the procedure change.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1210-7 Large Break LOCA Cooldown (PCR 1-OS-94-0142)

Description of Change: The procedure change describes actions to be taken by operators to prevent post-LOCA boron precipitation and also alerts operators to the HPI/LPI flow instrument cutout phenomena caused by the square root converters. The reverse flow path through the core during a cold leg LBLOCA was considered as the potential means for boron precipitation and methods were initiated inhibit entry into conditions where boron concentration exceeds the solubility limit. Full modeling reactor flow identified a previously uncredited flow path through hot leg nozzle gaps. These were considered and later verified by analysis of the as-built gaps by B&W NSSS to provide sufficient natural circulation within the reactor vessel to prevent boron precipitation. The passive method of post-LOCA boron dilution as a replacement for hot leg injection dilution was reflected in the procedure change.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1300-3Z.1 IST of ECCS Bypass Valves (PCR 1-OS-94-9018)

Description of Change: A new procedure was initiated as a result of NRC Inspection 92-04 and subsequent engineering evaluation which resulted in a revision to the list of valves that "are required to perform a specific function in shutting down the reactor or needed to mitigate the consequences of an accident".

Expansion of the scope of the TMI-1 IST Program will result in the testing of previously untested leakage paths. Plant configuration (valve lineups) were reviewed and found appropriate for the tests. Nuclear safety and safe plant operation were not adversely affected by the new procedure. Neither the probability and consequences of an accident or malfunction previously evaluated nor the probability or consequences of a new or different type is increased by the new procedure. No Technical Specification margin of safety would be reduced by performance of the procedurally controlled activities.

Safety Evaluation Summary: Based on the review performed, no Unreviewed Safety Question was found associated with the procedure.

Procedure: 1300-3Z.2 IST of ECCS Bypass Building Spray Valves (PCR 1-OS-95-9004)

Description of Change: A new procedure was initiated as a result of NRC Inspection 92-04 and subsequent engineering evaluation which resulted in a revision to the list of valves that "are required to perform a specific function in shutting down the reactor or needed to mitigate the consequences of an accident". The procedure tests valves BS-V59, BS-V60A/B, DH-V20A/B and DH-V21 which were added to the scope of the TMI-1 IST Program.

Expansion of the scope of the TMI-1 IST Program will result in the testing of previously untested leakage paths. Plant configuration (valve lineups) were reviewed and found appropriate for the tests. Nuclear safety and safe plant operation were not adversely affected by the new procedure. Neither the probability and consequences of an accident or malfunction previously evaluated nor the probability or consequences of a new or different type is increased by the new procedure. No Technical Specification margin of safety would be reduced by performance of the procedurally controlled activities.

Safety Evaluation Summary: Based on the review performed, no Unreviewed Safety Question was found associated with the procedure as revised.

Procedure: 1301-9.5 Reactivity Anomaly (PCR 1-OS-95-0091)

Description of Procedure: The procedure was revised to incorporate Boron-10 depletion guidelines into "all rods out" boron calculations, adjust the predicted boron curves to more accurately reflect core behavior over cycle life (based on the Simulate-3 core model benchmark) and include calculation references. The boron-10 depletion correction factor is used in accordance with B&W guidelines and provides a more accurate accounting of boron worth in relation to actual plant operating conditions over cycle life. The curves are therefore more accurate than those based on empirical assumptions. No changes to boron measurement uncertainties were made to the procedure, thereby, ensuring continued conservative reactivity management.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1302-29 Pressurizer System Failure (1-OS-94-0280)

Description of Procedure: The immediate manual actions to be accomplished during increasing or high RCS pressure conditions were revised to include a caution describing the use of the Pressure Operated Relief Valve (PORV) and the steps to be performed to mitigate RCS pressure transients.

Safety Evaluation Summary: Use of the PORV to mitigate RCS pressure transients with feedwater and the OTSGs available as heat sinks does not adversely affect nuclear safety or safe plant operation. The PORV is designed to be used to maintain the reactor in operation to mitigate a temporary plant pressure transient. Failure of the PORV in the open position has been evaluated as within the design basis of the plant and can be overcome by closure of RC-V-2: the block valve. The probability of occurrence or consequence of an accident or malfunction was not increased by the procedure revision. No new or different type accident was created. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1303-1.1 Reactor Coolant System Leak Rate (1-OS-94-0094)

Description of Procedure: The procedure for determining reactor coolant system leak rate was revised after a baseline was established applicable to Cycle 10. The value was derived from a statistical average of primary-secondary leak rate (PSLR) data from the beginning of Cycle 10. Operating License Condition 2.C.(8) limits TMI-1 PSLR to 0.1 gpm above the baseline leakage rate. The baseline leakage rate was determined during the steam generator hot test program in the mid-1980s and has remained at that 0.5 gal/hr level during the operating cycles completed since the unit's restart in 1985. The Operating License allows for reestablishment of the baseline following the removal of leaking tubes from service provided that the "leakage limit of Technical Specification 3.1.6.3 is not exceeded (<1.0 gpm). At the end of Cycle 9, PSLR was over 2.0 gal/hr. During the 10R Outage shutdown, over 30 leaking previously plugged tubes were identified by leak testing and were repaired by installation of redundant backup plugs. This action permitted the reestablishment of a new PSLR baseline value at the beginning of Cycle 10.

Safety Evaluation Summary: Leak testing and the repair of the leaks thereby identified during the 10 R outage combined with cooldown data analysis confirmed the non-existence of a tube with a critical size crack. Revision to the procedure was found to have no impact on the probability of occurrence or consequence of a malfunction, LOCA or Main Steam Line Break accident because of the likelihood of an OTSG tube rupture. No new or different type of accident or malfunction was created. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to be introduced by the change.

Procedure: 1303-3.1 Control Rod Movement (1-OS-94-0249)

Description of Procedure: The procedure was revised to incorporate the lessons learned from the April 14, 1994 performance of the surveillance procedure while inserting rods for a duration of 30 seconds instead of the usual 4 second insertion duration.

The procedure revision enhanced safety by requiring the monitoring of additional parameters, providing additional insertion duration and ICS guidance, requiring a power level limit to avoid potential overpower situations, providing additional guidance if rod recovery delays are experienced and providing a more optimal sequence if LEDs are not verified during the original rod insertion.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1303-4.16 Emergency Power System (1-OS-94-0339)

Description of Procedure: The procedure was revised to include steps to perform a blowdown of the air start piping prior to starting the Emergency Diesel Generator (EDG) engine. The purpose of the additional steps is to reduce the amount of dirt and rust in the air lines that has the potential to cause binding of the start valves and improve their reliability.

The air start line blowdown will be performed manually by a plant operator with the EDG out of the ES standby mode. Plant operation with one EDG out of ES standby mode is permitted by Technical Specifications. The EDG is not likely to be rendered inoperable by the procedure since the volume of air required for the blowdown is minimal, pressure will be maintained in the normal 225 to 250 psig band and sufficient air volume will remain to start the engine. Since the air start systems of the two EDGs are completely separate, the EDG that remains in ES standby will be unaffected.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1303-6.1 Reactor Building Integrated Leak Rate Test
(PCR 1-EG-94-0014)

Description of Change: Modifications to the Penetration Pressurization (PP) System required revision to the procedure delineating activities required for performance of the Reactor Building Integrated Leak Rate Test. The procedure as revised eliminated numerous PP system valves from Enclosure 2: Valve Lineup and Vent/Drain Guidance because of the removal of system piping and components from the plant.

Nuclear safety and safe plant operation were not adversely affected by the procedure revision. Neither the probability or consequences of an accident or malfunction previously evaluated nor the probability or consequences of a new or different type is increased by the revised procedure. No Technical Specification margin of safety would be reduced by performance of the procedurally controlled activities.

Safety Evaluation Summary: For the reasons identified above, evaluation of the procedure revision associated with the described modification found no Unreviewed Safety Question to be associated with the revised procedure.

Procedure: 1303-11.2 Pressurizer Code Safety Valve Setpoint Verification (PCR 1-MT-95-8594)

Description of Procedure: The procedure was completely revised to incorporate an option to perform in-place testing of the Pressurizer Code Safety valves. Testing is required by the ASME Boiler and Pressure Vessel Code Section XI and the plant Technical Specifications for the purpose of demonstrating that the valves provide over pressure protection for the reactor coolant system. Based on prior TMI, the nuclear industry's and the valve manufacturer's experience, use of Hydroset to in-place test the valves was made an option for valve set point verification. The Reactor Coolant Drain Tank is designed to safely quench a complete blowdown from the pressurizer for 14.4 seconds. It was calculated that with a maximum discharge rate of 83.5 lb/sec from either valve

(RC-RV1A/1B), the drain tank would adequately quench the discharge for a period of 88 seconds before the tank's rupture disk is blown out. Since lifting with the Hydroset is only for a short duration, and once the hydraulic pressure is released, the valve spring force immediately closes the valve. The evolution will not cause an upset in plant stability. The valve could be gagged within 80 seconds if the valve were to remain open at the Hydroset full lift position of 0.015 in.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1303-11.6 Spent Fuel Cooling System Functional Test
(PCR 1-OS-95-1411)

Description of Procedure: The procedure was revised to eliminate dual pump operations (making it consistent with 1104-6), and add additional acceptance criteria for leakage. The revision also included administrative changes which eliminated multi-functional steps and added system designators to valves and indicators.

Safety Evaluation Summary: Based on the above and the nature of the administrative changes, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1303-11.8 High Pressure Injection Testing (1-EG-94-0019)

Description of Change: The procedure was revised to modify the Makeup system valve lineup to isolate portions of the system that would be isolated during a safeguards actuation. The revised lineup eliminates inadvertent flow paths that could result in an apparent failure of the test. Other revisions to the procedure included items such as: changing the valve throttling criteria to address total flow above 550 gpm., updating guidance on use of the plant process computer, deleting limits and precautions redundant to other invoked procedures, added a third test point for pump performance evaluation and changed the check valve acceptance criteria.

Safety Evaluation Summary: An evaluation of the changes found the revision to the procedure to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1401-1.1A Reactor Coolant Pump (RCP) Lower Seal Housing Install/Remove (TCN 1-95-0097)

Description of Change: The temporary procedure change allowed the use of a standard o-ring for RCP-1C lower seal housing to pump flange joint instead of the designated high temperature o-ring since the high temperature material is not available to support the 11R outage. Although high temperature o-rings have been recommended by Westinghouse, several plants have not made the conversion. The high temperature o-rings increase the probability that the seals will survive a total loss of cooling. The were developed as a proactive measure to resolve NRC concerns over station blackout. Neither GPU Nuclear or Westinghouse has committed to use of the o-ring and NRC has not accepted them as the means to resolve the generic issue.

Safety Evaluation Summary: Failure of the o-ring will not result in a leak which exceeds makeup system capacity. Metal to metal contact is attained with the lower housing torque value and provides minimum area for leakage to occur. An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1401-4.8 Install/Remove B&W Rolled Mechanical OTSG Tube Plugs and Stabilizers (TCN 1-95-0101)

Description of Change: The procedure was revised to allow the use of a higher rolling torque (123 in-lbs \pm 10 in-lbs). This change is permissible since it permits rolling in accordance with B&W documentation identifying the maximum rolling torque that was qualified for the OTSG I-690 B&W Rolled Plug to be 133 in-lbs.

Safety Evaluation Summary: ASME Code stress analysis confirmed the structural adequacy of the plug design to act as a pressure boundary under various operating and transient conditions. The amount of wall thinning that resulted from the 133 in-lb rolling torque did not violate the minimum ASME Code allowable wall thickness. An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1401-18 Equipment Storage Inside Class I Buildings (PCR 1-MT-95-8631)

Description of Change: Numerous administrative changes were incorporated in the complete procedure re-write. The changes better define and control the concerns of the TMI seismic program. The beneficial aspects of the original procedure were retained. The few non-administrative changes (e.g. reduction in recommended wire rope weight and the addition of generic pre-approved tie-down guidance) were evaluated to assure that the resultant seismic restraints were structurally adequate and prevent damage to adjacent equipment.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1407-10 Quality Verification (QV) Program (1-MT-94-9021)

Description of Change: Reorganization of the QA Department and revision of the GPUN Operational QA Plan established the need for new procedures to accomplish activities previously performed within the QA Department that are now done under the Plant Maintenance Department. The Quality Control Inspection Program was replaced by the Quality Verification Program and the new procedure moved appropriate existing QA program activities into the Plant Maintenance Department. The new procedure delineates the administrative controls applicable to the planning, conduct and documentation of quality verification activities as well as the method for performing periodic quality trending of material nonconformances and minor deficiencies.

Safety Evaluation Summary: The new procedure was reviewed and found to have no direct affect on any system, structure or component. All commitments in the QA Plan remain unchanged and sufficient independence of oversight activities continues and will be reviewed to assure the adequacy and effectiveness of the process. The changes were administrative in nature and did

not adversely affect nuclear safety or safe plant operations. Neither the probability or consequences of an accident or malfunction previously evaluated nor the probability or consequences of a new or different type accident is increased by the new procedure. No Technical Specification margin of safety would be reduced by performance of the procedurally controlled activities. For these reasons, evaluation of the new procedure associated with the company reorganization found no Unreviewed Safety Question to be associated with the new procedure.

Procedure: 1407-11 Quality Verification Document Review
(1-MT-94-9020)

Description of Change: Reorganization of the QA Department and revision of the GPUN Operational QA Plan established the need for new procedures to accomplish activities previously performed within the QA Department that are now done under the Plant Maintenance Department. The new procedure moved appropriate existing QA program activities (document review) into the Plant Maintenance Department.

Safety Evaluation Summary: The new procedure was reviewed and found to have no direct affect on any system, structure or component. All commitments in the QA Plan remain unchanged and sufficient independence of these oversight activities continues and will be reviewed to assure the adequacy and effectiveness of the process. The changes were administrative in nature and did not adversely affect nuclear safety or safe plant operations. Neither the probability or consequences of an accident or malfunction previously evaluated nor the probability or consequences of a new or different type accident is increased by the new procedure. No Technical Specification margin of safety would be reduced by performance of the procedurally controlled activities. For these reasons, evaluation of the new procedure associated with the company reorganization found no Unreviewed Safety Question to be associated with the new procedure.

Procedure: 1407-12 Qualification of Quality Verification Personnel
(1-MT-94-9019)

Description of Change: Reorganization of the QA Department and revision of the GPUN Operational QA Plan established the need for new procedures to accomplish activities previously performed within the QA Department that are now done under the Plant Maintenance Department. The new procedure moved appropriate existing QA program activities (personnel qualification) into the Plant Maintenance Department.

Safety Evaluation Summary: The new procedure was reviewed and found to have no direct affect on any system, structure or component. All commitments in the QA Plan remain unchanged and sufficient independence of these oversight activities continues and will be reviewed to assure the adequacy and effectiveness of the process. The changes were administrative in nature and did not adversely affect nuclear safety or safe plant operations. Neither the probability or consequences of an accident or malfunction previously evaluated nor the probability or consequences of a new or different type accident is increased by the new procedure. No Technical Specification margin of safety would be reduced by performance of the procedurally controlled activities. For these reasons, evaluation of the new procedure associated with the company reorganization found no Unreviewed Safety Question to be associated with the new procedure.

Procedure: 1410-Y-80 OTSG Cold Leg Dam Installation, Removal and Testing (PCR 1-MT-95-4530)

Description of Change: The procedure change was a general rewrite of the Nozzle Dam procedure. The revision included: steps to provide stainless steel protective covers for the nozzle dams to protect them from damage, increase

seal pressures from 65 to 75 psig as recommended by the equipment manufacturer and finally provide reference to the new seal manufacturer and restricted the number of times/length of time that a rubber diaphragm may be used due to shelf life considerations. These changes to the procedure made performance of the activities safer and did not adversely affect the ability of the nozzle dams to perform their intended function.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 1507-3 Main Fuel Handling Bridge Operating Instruction
(PCR 1-OS-95-0499)

Description of Change: The procedure change was implemented to clarify procedural requirements regarding the supervision of core alterations. By proceduralizing the associated requirement immediately prior to the steps which could result in core alterations, the probability of unsupervised movements is expected to be reduced. The change did not modify the steps to approved fuel handling procedures. It clarified and reinforced the administrative requirements.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1507-4 Auxiliary Fuel Handling Bridge Operating Instruction
(PCR 1-OS-95-0504)

Description of Change: The procedure change was implemented to clarify procedural requirements regarding the supervision of core alterations. By procedurelizing the associated requirement immediately prior to the steps which could result in core alterations, the probability of unsupervised movements is expected to be reduced. The change did not modify the steps to approved fuel handling procedures. It clarified and reinforced the administrative requirements.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 1550-01 Controlling Procedure for Physics Testing
(PCR 1-OS-95-0342)

Description of Change: The procedure was changed to incorporate the steps applicable to performance of the Reactor Coolant (RC) flow verification previously performed via SP 1303-1.2 which was simultaneously canceled. The change also made slight changes to the flow verification method. The purpose of the RC flow verification is to ensure that the analysis for power/flow trip and/or overpressure trip remains conservative. It was performed within 90 days of achieving 100% power following a refuelling. The surveillance method results were compared with NAS calculated results since Cycle 6 and were supportive of the change in method. Small differences between the NAS package results and the surveillance exist in that the NAS package does not account for heat losses. This causes a slightly smaller and slightly more conservative calculated RC flow. Beginning with Cycle 11 the RC flow verification was done using the Nuclear Applications Software (NAS) or equivalent on the plant

process computer. It was performed as part of full power physics testing once the maximum power attainable at the beginning of the cycle was reached.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: 6610-ADM-1010.01 TMI Radiological Controls/Safety Organization (PCR 1-RC-94-0083)

Description of Change: Paragraph 12.1 of the TMI-1 FSAR describes the role and responsibilities of organizations. Those roles and responsibilities were changed as a result of changes to the GPUN organization. The revision to the procedure involved inclusion of the position of Manager, Rad Health / Occupational Safety.

Safety Evaluation Summary: The organizational change described above was made as a result of senior GPUN management discussion and decisions. Realignment of the organization was evaluated and determined to have no adverse impact on nuclear safety, involve no Unreviewed Safety Question and have no environmental impact.

Procedure: 6610-ADM-4330.02 Personnel Contamination Monitoring and Decontamination (PCR 1-RC-94-0091)

Description of Change: The procedure was revised to improve the documentation, trending and investigation of personnel skin and clothing contaminations. The changes progressively focus more attention to those skin contaminations resulting in higher doses. Noble gas and neutral product skin and clothing contaminations are no longer a concern.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: 6610-PLN-4200.02 Emergency Dose Calculation Manual (EDCM) (PCR RC-95-0002)

Description of Change: The procedure was changed to:

- 1) have the procedure describe the methodology rather than the software interfaces that perform the calculations. The maximum credible accident at TMI-1 is a fire in the reactor building during which the purge is not isolated. The off site dose from the event is 13.5 mrem.
- 2) modify the liquid dose calculation methodology to allow use of sample results since RM-L-10 was removed from service. Modifications to the liquid calculation methodology maintain the capability to take timely proactive actions.
- 3) remove references to normal RCS activity and spiking factors since they are updated in data files.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: E-14A Reactor Building Polar Crane Inspection
(PCR 1-MT-95-2027 and TCN 1-95-0069)

Description of Change: The procedure as revised by the PCR provides clarifications and additional information and eliminates work which has been evaluated as unnecessary but previously performed. None of the eliminated work is required by either OSHA, ASME, CMMMA, or NRC codes or the plant's Technical Specifications.

The TCN revised the procedure to provide flexibility in scheduling performance of NDE inspections of the main and auxiliary hooks during the 11R outage.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

In support of the TCN, ANSI B30.10-1982 states that hooks shall be "examined" for various inspection attributes including cracks, distortion, wear, etc. An ASME/ANSI Interpretation 10-5 dated 10/21/95 specifically identified all "inspections" as "visual" and not "NDE". No commitments were identified which required hook NDE examination. No Unreviewed Safety Question resulted from the revision of the method used to inspect the polar crane main and auxiliary hooks.

Procedure: MAP-G Main Annunciator Panel G (PCR 1-OS-94-0282)

Description of Change: The procedure was revised to change the manual actions required for a Reactor Coolant Pressure Narrow Range Hi/Low Alarm. A caution was added to address use of the Power Operated Relief Valve (PORV) for mitigation of increasing RCS pressure transients while the reactor is in operation. Steps were added to allow use of the PORV as required and to document the use of the PORV. Use of the PORV with feedwater and the OTSG's available as heat sinks is appropriate action to mitigate a temporary pressure excursion. Failure of the PORV while in the open position is within the design basis of the plant and can be blocked by closure of RC-V-2.

Safety Evaluation Summary: Based on the above, the revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: N1918 Determination of Anions by Ion Chromatography
(TCN 1-95-0136)

Description of Change: The temporary procedure change was initiated to permit use of the new Autoion 450 equipment for measuring low level chlorides and sulfates in the primary coolant prior to developing a new procedure for the equipment which will address all capabilities. It replaces the Autoion 100 unit which previously controlled the instrument and strip chart recorder used to capture IC chromatograms. The difference between the old and new units is that beside controlling valve functions, the Autoion 450 unit calculates concentrations, a task previously performed by the technicians. The unit calculates accurate and consistent chloride and sulphate values.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure revision. No Unreviewed Safety Question resulted from the revision.

Procedure: Decay Heat Closed Cooling Flush (STP 1-94-0003 and 0014)

Description of Change: The procedures were initiated to allow introduction of dispersant to be followed by flushing the Decay Heat Closed Cooling Water System (DHCCWS) to remove residual NALCO rust inhibitor. Filling and draining were performed in a controlled manner so as not to negatively impact system volume or exceed pump makeup capability.

Safety Evaluation Summary: The procedure as revised was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: De-energize ASCO Auto Transfer Switch; SED-SEC9
(STP 1-94-0023)

Description of Change: The procedure was implemented to perform preventive maintenance (PM) on the specified auto transfer switch. Certain Security power distribution panels will be removed from service during the PMS however, critical loads remained energized from the UPS battery. The system is designed to operate from the battery in the event of loss of DC power. Loss of the critical load power supply would require initiation of Security compensatory measures.

Safety Evaluation Summary: The revision to the procedure was found to have no impact on the probability of occurrence or consequence of an accident or malfunction either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question was found to exist.

Procedure: DH-V-1 and 2 Motor Operator Maintenance During 11R
(STP 1-95-0018)

Description of Change: The procedure was initiated to control the work sequence during maintenance on the motor operators on DH-V-1 and 2 such that the motor operators can be disassembled with the Decay Heat Removal system in service and with the fuel transfer canal full. The procedure directs that a friction clamp be installed on the valve stems in accordance with Engineering Evaluation 95-025. A stem nut was installed as a backup to the clamp to hold the valves open. Periodic inspections assured the valves remain open.

Safety Evaluation Summary: An evaluation performed by the Nuclear Engineers determined that the four fuel assemblies with the highest decay heat levels would generate less than 188KW 11 days after plant shutdown. Therefore, it was permissible to load any four used assemblies and any number of new fuel assemblies into the reactor core and remain below the TS 3.4.2.1 limit. It also determined that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure. No Unreviewed Safety Question resulted.

Procedure: OTSG Upper Head Flush (STP 1-95-0022)

Description of Change: The procedure provided directions for flushing the OTSG upper heads to reduce dose rates and/or aid in improving visibility during bubble test inspections. Flushing with reclaimed (demineralized) water posed no concerns from a water chemistry contaminant level standpoint. And flushing with less than 5000 gal did not present a boron dilution or reactivity concern since the water was later drained to permit installation of the

cold leg dams. Unborated water did not remain in the OTSGs or cold leg piping to pose a deboration risk to later refueling activities.

Safety Evaluation Summary: An evaluation of the revised procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure. No Unreviewed Safety Question resulted.

Procedure: CRDM Nozzle Microstructure Replication (STP 1-95-0023)

Description of Change: The procedure was initiated to obtain microstructure replication of the Control Rod Drive Nozzles to evaluate the affect of primary water stress corrosion cracking on these components. Metalographic samples were polished and etched and directly viewed by a scanning electron microscope to examine grain structures and the location and distribution of carbides within the grains. The replication provided the B&W Owners Group with information necessary in determining if and when further "under head" reactor vessel investigation would be required.

Safety Evaluation Summary: B&W Nuclear Technologies performed the 50.59 Evaluation for the CRDM Nozzle Replication. The review found performance of the task in accordance with the procedure did not increase the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type. No Technical Specification margin of safety was reduced by performance of the procedure since design and safety components were not affected by the minimal amounts of nozzle material removed at the replicated areas. No Unreviewed Safety Question resulted.

Procedure: Spent Fuel Supplemental Cooling (STP 1-95-0024)

Description of Change: The procedure provided the means to line up the Decay Heat Removal System to provide Spent Fuel cooling during a loss of an operating Spent Fuel cooling pump with the added complexity of having either the 1P or 1S bus outage in progress which would have affected the availability of the other pump.

Safety Evaluation Summary: An evaluation found that normal Spent Fuel cooling flow of 1000 gal/min could be maintained with Decay Heat Removal cooling. The maximum expected heatup rate for the Spent Fuel pool with a freshly off loaded core was 5 to 6°F/hr without cooling water flow. With an initial temperature of 120°F, it would take greater than 13 hours to increase the pool temperature to 200°F. This was determined to be acceptable since the worst case for return of a bus to operable status was three hours. The probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure. No Unreviewed Safety Question resulted from the procedure change.

Procedure: Fuel Assembly Holddown Spring Replacement (STP 1-95-0026)

Description of Change: The procedure identified the requirements and steps to be performed during the replacement of the fuel assembly holddown springs.

Safety Evaluation Summary: An evaluation found that the springs replaced were of the same type and size, manufactured to the same QA specifications and met the same installation requirements as the originals. There were no changes to fuel assembly design characteristics, description or operation parameters due to performance of activities in accordance with this procedure. The probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure. No Unreviewed Safety Question resulted.

Procedure: Reactor Coolant Pump (RCP) Impeller Inspection
(STP 1-95-0027)

Description of Change: The procedure was initiated to provide direction for the inspection and video recording of the condition of the four RCP impellers using the inspection tool developed, and financed by the B&W Owners Group. The tool was designed to be inserted through the OTSG lower end bell and guided into the cold leg, before climbing the J leg and telescoping to the pump impeller. A high resolution camera inspected the visible portion of the impeller and provided output for video taping.

Safety Evaluation Summary: The work was performed with the plant in cold shutdown with the primary plant in a low level, mid loop arrangement. The tool was designed for retrievability. Removal and confirmation of parts inventory were carried out directly following the inspection as were corresponding verification sign-offs in the procedure. An evaluation of the procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure. No Unreviewed Safety Question resulted.

Procedure: Fuel Assembly Reconstitution/Recaging (STP 1-95-0028)

Description of Change: The procedure identified the requirements and steps to be performed during the reconstitution and recaging of B&W Mk-B fuel assemblies. Assembly reconstitution involved the removal of failed fuel rods from a fuel assembly and replacement with dummy rods. Recaging involved the removal of all non-failed rods from a fuel assembly and reinserting them into a new fuel assembly skeleton cage.

Safety Evaluation Summary: The activities were performed in accordance with BWFC Field Change Authorization. The replacement parts were manufactured and inspected to the same standards as parts found on new fuel. Topical Report BAW-2149, approved by the NRC, provided the basis that reconstituted fuel consistent with the restrictions of the report does not present an Unreviewed Safety Question. An evaluation of the procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure. No Unreviewed Safety Question resulted.

Procedure: Microbiologically Induced Corrosion (MIC) Testing at FS-P-3 Discharge (STP 1-95-0037)

Description of Change: The procedure describes the methodology used to obtain a system lineup and permit the evaluation and optimization of chemicals to minimize plant pipe corrosion (specifically in the FS-P-3 discharge piping).

Safety Evaluation Summary: Isolation of FS-P-3 and installation of a recirculation rig for duration of the performance of the procedure was permissible provided the requirement for availability of two other Fire Service yard loop pumps was satisfied. An evaluation of the procedure found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure. No Unreviewed Safety Question resulted.

Procedure: Transfer the Power Source of DCB to the Substation Batteries
(STP 1-95-0041)

Description of Change: The procedure was initiated to permit isolation of the 230KV Substation devices from the "B" side DC Distribution System for the purpose of troubleshooting DC grounds.

Safety Evaluation Summary: An evaluation of the procedure found that the operability and availability of the plant DC system is maintained. The DC Distribution System for in plant systems support is unaffected by the procedure. The DC power availability with DCB powered from the substation Batteries is within the bounds assumed for reestablishing an AC source for recharging batteries and/or operating substation breakers. The probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the procedure. No Unreviewed Safety Question resulted.

Document: Plant Final Safety Analysis Report Update (PFU 96-T1-009)

Description of Change: New self reading dosimeters are now used in lieu of an ion chamber design. The new design units predict the accumulated value on the dosimeter of record accurately. A change was also made to process thermoluminescent dosimeters annually based on the fact that the legal dose limits are in terms of annual dose, the likelihood of overexposure as a result of the frequency is small and the NVLAP requirements continue to be met by the system for the frequency of annual reads.

Section 11.5.2, the description of the Personnel Monitoring System, of the Final Safety Analysis Report will be revised accordingly.

Safety Evaluation Summary: An evaluation of the change found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the change.

Document: Plant Final Safety Analysis Report Update (PFU 96-T1-010)

Description of Change: A new position, Rad Health/ Occupational Safety Manager, was added which among other things is answerable to the functions and responsibilities deleted from the Radiological Engineering Manager position. There was no change to the accountabilities, duties or responsibilities within the Radiological Controls department.

Section 12.1.1.28, the description of the Radiological Engineering Manager, of the Final Safety Analysis Report will be revised to reflect a reduction in functions and responsibilities.

Safety Evaluation Summary: An evaluation of the change found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the text revision.

Document: Plant Final Safety Analysis Report Update (PFU 96-T1-020)

Description of Change: Hydrographic surveys will not be performed yearly but will be performed on an as-determined basis. Substantial changes that result from typical river flow patterns are considered unlikely over the next 10 to 20 years, since none have been observed since 1967. The prior surveys encompassed periods with flooding and low flow events. The river bottom in the vicinity of TMINS has been determined to be stable and in regime.

Section 2.6.3, the description of low flow studies of the Susquehanna River, will be revised to eliminate the requirement for GPU Nuclear to perform yearly hydrographic studies of the York Haven Pool near TMINS.

Safety Evaluation Summary: An evaluation of the revised descriptive text of the FSAR found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the text revision.

Document: Loading for the Emergency Diesels (PFU 96-T1-051)

Description of Change: Emergency Diesel loading values were recalculated and documented in TDR 836, Revision 6. The updated load values were from either load measurements, previously documented and evaluated load changes, vendor information, or component run-out loading values determined by Mechanical Engineering. The results were design verified and show that diesel loading is within the 2000 hr. rating of the diesels. The revised loading values reflect the expected component loading under large break LOCA conditions based on component operation at run-out conditions. Minor changes were made to loading. The loading sequence was not changed, nor has any large load been added to any of the load blocks. Diesel response remains within the SAR analysis.

Chapter 8, page 2-23 and Tables 8.2-8 and 8.2-9 will be revised accordingly.

Safety Evaluation Summary: An evaluation of the changes found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the text revision.

III. Modifications

Modification: Turbine Control System Digital Upgrade (MDD-TI-626A)

Description of Modification: The modification replaced the electronic portion of the Electro-Hydraulic Control (EHC) system with a fault tolerant Digital Turbine Control System (DTCS) and modification of portions of the EHC hydraulic fluid supply and the turbine supervisory instrumentation were also modified. The DTCS installed is a GE Mark V digital microprocessor-based system. The DTCS replicates the original function of the EHC with minor changes. Operator interface in the control room is via a touch screen and trackball which communicates via an industrial "personal computer" and arcnet data link with the DTCS cabinets located in the relay room. The DTCS cabinets replace the EHC cabinet in the relay room. Control room indication and controls are "hard-wired" directly to the DTCS cabinets. Increased reliability is achieved through triplication of critical input and output devices. The modified systems do not interface with any other safety related system except the 120 volt AC vital Power System with which there is no adverse affect. DTCS failure is not expected to be more probable than failure of the old system. It also exhibits the same system level failure modes as the old system. System failure is not an issue since the reactor is protected by high and low pressure reactor protection system setpoints. No Technical Specification limits will be exceeded directly due to DTCS failure.

Safety Evaluation Summary: An evaluation of the modification found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Permanent Demineralizer System Installation
(MDD T1/T2-232B)

Description of Modification: The EPICOR-II demineralizing system located in the Chemical Cleaning Building was demolished to the extent necessary to facilitate its replacement with a new Permanent Demineralizer System. The new system is capable of processing rad waste from the TMI-1 Miscellaneous Waste System, TMI-2 miscellaneous water and in the event of a TMI-1 primary-to-secondary leak, secondary water from the condensate system and turbine building sump. Use of the system for this purpose will reduce the quantity of contamination and expedite repairs.

The new Permanent Demineralizer System does not directly/indirectly interact in any core accident safety function and thereby eliminates any concern with plant margin of safety. The system has no interface with equipment Important to Safety (ITS) and is not located such that any failure to the demineralizer system will cause failure to ITS equipment. The existing discharge limits defined in the Technical Specifications are being observed during operation of the new system. As installed, the system complies with the intent of Reg. Guide 1.143. The plant's radiological criteria for discharge are in accordance with 10 CFR 50, Appendix I and were not revised as a result of the installation of the demineralizer system. Plant operation was enhanced by installation of the new system since waste water inventory was reduced and the liquid storage volume availability was increased.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Seal Penetration Between The Auxiliary Building and BWST Tunnel (T1-CCD-000154-001)

Description of Modification: The configuration change modified a seal penetration in an Auxiliary Building wall to comply with FSAR Section 2.6.5, which states that all openings and penetrations in the Auxiliary Building are required to be sealed against flooding. As a result, the upper portion of the penetration at pull boxes P-60 thru 62 was sealed with reinforced non-shrink grout. The lower section was compartmentalized with steel plate and the existing conduits and cables were grouped, for convenience, in three bundles (according to their classification; power, instrumentation and control) and placed in three of the four compartments. A steel plate was installed at the end of the steel compartments on the BWST Tunnel side of the Auxiliary Building wall and a Thermo-Lag board, used as a form for the grout, was not removed from the interior side of the wall. Potting compound was used to seal around the conduits and cables and fill the unused, spare compartment to minimize water seepage as practically achievable.

The passive modification corrected a condition not in conformance with the FSAR. It had no affect on nuclear safety or safe plant operation since no system operations, components or structures were affected.

Safety Evaluation Summary: An evaluation of the modification found, based on the above information, that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Reactor Coolant System Thermowell Modification
(T1-CCD-128168-245)

Description of Modification: As a result of problems with leakage at the RCS thermowell pressure boundary joints of the resistance temperature detectors (RTD) following plant shutdown and startup (presumably from thermal cycling), an improved method of securing the thermowell to the RCS boss was developed. The new method makes use of a new device. Bolted flanges replace the nut threaded boss previously used. The new design provides more even loading of the gasket and sealing surface. New design thermowells were also installed. The new thermowell design increases the material thickness at the sealing surface to reduce stresses in the area. The new design thermowell and new securing device are as strong or stronger than the previous configuration. Use of the existing RTDs with the new thermowells was documented as an acceptable practice by the RTD manufacturer.

Safety Evaluation Summary: An evaluation of the modification found, based on the above information, that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Reactor Coolant Cold Leg Supports (T1-CCD-128205-001)

Description of Modification: High piping stress conditions lead to the reconfiguration of the support scheme for the Reactor Coolant System cold leg drains. Calculations determined the need for pipe support modification to reduce the thermal over stress condition in the piping. Reactor coolant pump suction drain line support scheme was reconfigured by removal, modification or installation of new supports as directed by the modification package. The modification involves supports only and does not affect the system pressure boundary. The new /modified supports meet, as a minimum, the original plant design, materials, fabrication, erection, and testing/inspection requirements. The thermal stresses, seismic and deadweight loads were evaluated and found within design requirements.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Equipment Anchorage Upgrade (T1-MM-412552-001/002)

Description of Modification: Modifications described in -001 were made to correct seismic mounting deficiencies of Air Handling equipment in the Auxiliary and Fuel Handling Building, Intermediate and Reactor Buildings and ensure equipment seismic adequacy in accordance with plant design. Modifications described in -002 were made to correct seismic mounting deficiencies of electrical and control cabinet and panel anchorage based on concerns of interaction of these components with adjacent equipment during a seismic event. These concerns were identified during the Seismic Qualification Utilities Group (SQUG) walkdowns of the plant. The modified equipment anchorage precludes sliding and/or tipping during a seismic event. All modifications improved the seismic performance and reliability of the affected equipment. The modifications are passive and do not function until a seismic event.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: D-Ring Platforms (T1-CCD-412615-002)

Description of Modification: The modification designed, fabricated and erected two platforms at the top of the D-ring walls, inside the "A" and "B" D-ring compartments, to provide safe work areas of sufficient size to support outage activities. The platforms were supported by existing steel framing at the 365' 4.5" elevation and consist of grating, toe plates and handrails. The platforms do not interface with any existing plant system or components. Additional dead and live loads are applied to the secondary shield walls which was analyzed and found acceptable. Interferences with components projecting through or near the platforms were accounted for as well as possible thermal growth interaction. All materials are compatible and suitable for service within the TMI-1 containment.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Fuel Transfer Canal Stairway (T1-CCD-412615-004)

Description of Modification: A portable stairway was built for use in the Refueling Transfer Canal during outages. Previously a scaffold stairway was erected and removed both at the beginning and end of refueling outages. Use of the portable stairway eliminates the need to erect and remove the scaffold stairway twice per outage. Two brackets for the upper plenum storage stand are removed to ease installation of the portable stairway in the canal. It will be seismically tied down, when installed, to prevent tipping during a seismic event. A locked high rad door is installed on the stairway to control access to the canal when the stairway is in place. Movement of the stairway, classified as a Class C load by ANSI.N45.2.15, with the polar crane over a previously designated heavy load lift path. During plant operation, the stairway will be tied down on the 346' elevation or the reactor building. The modification has no effect on the operation or performance of any system. Equipment and components associated with the modification are tied down in accordance with the plant procedure for storage of loose equipment in Class I buildings during plant operation.

Safety Evaluation Summary: An evaluation of the modification found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Heater Drain Pipe Replacement - Phase 2 (TI-CCD-412652-001)

Description of Modification: The modification replaced selected sections of carbon steel heater drain piping that deteriorated as a result of erosion/corrosion. The replacement piping was stainless steel which is superior to the carbon steel with respect to resistance to erosion. The piping involved in the modification includes: the 8" "B" and "C" Heater Drain Pump discharges, the remains of a 14" header not replaced by mod TI-MM-412638-001 and the 14" header to valve HD-V-3B (including the valve support lug).

Safety Evaluation Summary: An evaluation of the modification found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: RCP "B" Seal Injection Leakoff Enhancement
(TI-CCD-412654-001)

Description of Modification: The modification replaced the 1" "B" reactor coolant pump (RCP) seal injection drain line and isolation valves with 1.5" pipe and valves which are used during seal maintenance while the pump is on the backseat. The 1" drain line was of insufficient capacity to accommodate the considerably higher leakrate from the "B" RCP resulting from not lapping the backseat when the new shaft was installed in the 1980s. The configuration change preserved the integrity of the reactor coolant pressure boundary did not interfere with the normal operation of the Make-Up and Purification System or its ability to provide seal water to RCP "B". The drain line is not used during normal plant operation.

Safety Evaluation Summary: An evaluation of the modification found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Reactor Building Supplemental Hoists- Support Substructure
Fabrication and Installation (T1-CCD-412655-001)

Description of Modification: The modification involved permanently mounting three floor-mounted jib cranes in the TMI-1 Reactor Building to provide hoisting capability to supplement that currently provided by the Reactor Building Polar Crane. The jib cranes serve two functions: 1) two provide lifting capability over the Reactor Vessel and areas inside the Secondary Shield walls for movement of equipment not requiring the capacity of the Polar Crane. These are mounted atop the Secondary Shield walls at the 365' elevation. 2) the third provides lifting capability over the removable grating on the 346' elevation and also allows access to the 305' and 281' elevations. It was mounted on the floor of the 346' elevation. Vulnerability to components from dropped or mishandled loads was considered case specific and was not addressed by the evaluation. No permanent power provisions were required for the cranes. Results of the TERA Report support use of the cranes without raising nuclear safety concerns since none of the cranes can carry a load over the portion of the Reactor Building 346' floor which is vulnerable to heavy load drops, and the Secondary Shield wall-mounted cranes are of too low a capacity (1 ton capacity) to lift a heavy load. The cranes are passive components and do not affect the operation of plant systems.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Reactor Building Permanent Scaffold Storage Racks
(T1-CCD-412658-001)

Description of Modification: As a result of the modification, permanent scaffold pole storage racks were installed on the 281' elevation and storage for scaffold knuckles on the 308' elevation of the Reactor Building (RB). All stored scaffold equipment is above the RB flood level and is protected from RB Spray with the exception of the 10 and 13 foot poles. Since the poles are galvanized, a recalculation of the value attributed to the additional zinc added to the RB by poles not protected from RB Spray and thus available for Hydrogen generation was performed. Components associated with the modification were designed and installed in accordance with Seismic Class II anti-falldown criteria. The racks are passive and designed not to interact with any equipment under any circumstances.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Load Sequence Timer Undervoltage Relay Interlocks
(TI-CCD-412673-001)

Description of Modification: Simulator testing showed the potential for ESAS block load timer delays based on degraded grid conditions that cause the ES 4160 volt buses to be near the degraded grid relay setpoints. As a result, the modification was made to have the load sequence timers reset by the loss of voltage relays (27-4, 5, and 6) which do not actuate during block loading instead of the degraded grid relays (27-1, 2, and 3). Block loading will not be interrupted by voltage dips below degraded grid setpoints. The modification involved removing the degraded grid auxiliary relay (27x-1, 2, and 3) from the timer circuits and replacing them with the loss of voltage auxiliary relay (27x-1, 2, and 3) contacts. New circuits were also installed from spare normally open relay contacts to terminals for the timer circuits.

Diesel generator loading was not affected by the modification and electrical isolation and separation were maintained. There was no change to the designed ES block loading sequencing. Only a change to the method of resetting the load sequencing timers was involved. The possibility of increased block load sequencing time was reduced by providing the permissive for load sequencing with the loss of voltage undervoltage relays instead of the degraded grid undervoltage relays. Operation was made more reliable by the modification.

Safety Evaluation Summary: An evaluation of the modification found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Nuclear Instrumentation Source Range Upgrade - Phase II
(TI-MM-412626-001/002)

Description of Modification: During Phase I, the NI-1 & NI-2 loops were disconnected from the peripheral equipment and were changed-out with NI-11 & NI-12 during refueling outage 9R. The units were susceptible to noise and were difficult to maintain. The loops were spared in place until there was sufficient confidence in the use of the Gamma Metrics detectors in startup and refueling situations.

Phase II of the modification completely removed the NI-1 and NI-2 Source Range Monitoring Loops from the plant. Tasks included removal of the NI-1 & NI-2 BF, detectors, the associated preamps and cabling, the NI-1 & NI-2 modules and wiring within the NI/RPS cabinets. Installation of NI-11a & NI-12a detector and cable assemblies and all associated signal amplifiers and processors was completed. The NI-11a & NI-12a will normally be used to provide count rate and rate of change to the plant computer. Count and count rate signals are also supplied to the NI/RPS cabinets for connecting portable instruments during refueling and plant startup activities. They also serve as backups for NI-11 & NI-12.

The new equipment is compatible with the old in that detector sensitivity and operational capabilities are similar. The new monitoring instrumentation provides more reliable information and is designed to operate during all modes of plant operation. The modification was designed and installed in accordance with the appropriate Class 1E separation criteria and is consistent with NI-11 & NI-12 separation requirements. Plant safety functions were not altered by the modification.

Safety Evaluation Summary: An evaluation of the modification found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Fuel Handling Bridge Equipment Upgrade (T1-MM-412629-001)

Description of Modification: The modification replaced the existing motor control centers (MCCs) on the Main and Auxiliary Fuel Handling Bridges with new MCCs which employ variable frequency motor drivers. The variable frequency drive system improves bridge reliability and provides smoother bridge operation while operating modes and controls remain the same. The new MCCs have quick disconnects which allow for storage in a mild environment during periods of plant operation. The MCCs enclosures are constructed of all stainless steel and were fully wired and pretested at the vendor's shop prior to shipment. The Auxiliary Bridge was also fitted with a pneumatic fuel grapple actuation system which replaced the hydraulic system components which existed previously.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

mode above

change mode below

Modification: RMS Recorders in Control Room PRF (CMR 90-181)

Description of Modification: The modification removed the obsolete Leeds & Northrop TIGRAPH recorders in the Radiation Monitoring System. Their previously trended input signals were either transferred to the Plant Process Computer via BA 412605 or to replacement recorders installed via this CMR in cases where the recorder function was still appropriate (key effluent monitoring channels RM-A5, A7, A8PIG, A9PIG, A15, VA-FT-1113 and RM-L6, and movable atmospheric monitors RM-A12 and A13).

Safety Evaluation Summary: An evaluation of the modification found that there was no adverse affect the overall function or the performance of the Radiation Monitoring System. There was no negative impact on nuclear safety or safe plant operation. The probability of occurrence or the consequence of an accident or malfunction either previously analyzed or of a new or different type was not increased by the modification since the recording function is passive and not relied upon for accident protection or malfunction protection. No Technical Specification margin of safety was reduced and no Unreviewed Safety Question resulted from the modification.

Modification: DH-V6A and 6B Drain Provision (CMR 92-003)

Description of Modification: A manual valved and capped drain line was installed on the inlet side of DH-V6A/6B. The modification was necessary to correct a lack of adequate drainage which allows approximately 100 gallons of RB sump water to travel into the Decay Heat system when the valves are opened for IST testing each refueling outage. By allowing the line to be drained, the modification will eliminate the need to cleanup the RCS because of the potential for cross-contamination of the RCS by water from the RB sump and the possibility of damage to DH and RCS components from chemical contamination.

Installation of the small-bore, administratively controlled drain line did not affect the function, integrity, or normal or emergency performance of the DH system or any other system or component. Long term benefit was provided by

ensuring no contamination of the DH system by fluid from the Reactor Building sump. The design basis of the DH system was unchanged.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Radiation Monitor RM-A4, A6 and A8 Power (CMR 92-031)

Description of Modification: It was determined that Technical Specification requirement 3.21.2, that requires that RM-A8 or RM-A4 and RM-A6 be operable to monitor the Auxiliary and Fuel Handling Building ventilation exhaust, could not be satisfied. Loss of Vital Bus (VBC) would have put the unit into a Limiting Condition of Operation since both monitors were powered by the same bus; Vital Bus VBC. As a result, the VBC power feed to RM-A4 was removed as was the VBA power feed to RM-A6. Both RM-A4 and RM-A6 were re-powered from VBD. All wiring changes were completed within Control Room Panel Right Front. The separation of power lessens the chance of an unmonitored exhaust from the Auxiliary and Fuel Handling Buildings. There was no change to the functional or performance characteristics as a result of the power supply change. All display and interlock features of the monitors involved were maintained.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Removal of the "A" Beckman H₂/O₂ Analyzer Recorder (CMR 92-082)

Description of Modification: The Tigraph M/N 100 recorder installed in the "A" Beckman H₂/O₂ Analyzer was removed because it was no longer maintainable since parts necessary for repair were not available. A filler plate was installed in place of the recorder to isolate the piping to it. Neither the Technical Specifications nor other requirements require a trending instrument to be operable on the "A" Beckman H₂/O₂ Analyzer. The high H₂/O₂ concentration alarms were not affected by the removal of the recorder.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Reactor Coolant Pump (RCP) Cartridge Seal Installation (CMR 92-114)

Description of Modification: The modification replaced the RCP original design seal package with the new design cartridge seal package. The standard seal (original equipment) sealed the RCP shaft in three stages. The #1 seal was a controlled leakage film riding face seal while the #2 and #3 seals were mechanical rubbing face seals. The replacement cartridge seal is similar in function and performance to the original equipment and as a unit provided the same sealing function with the added advantage of allowing easier maintenance. Minor changes in leak-off line configuration and dimensional characteristics was necessary to complete the installation. The performance and function of

the RCP and its interfacing systems is unchanged during normal, emergency and abnormal operation with the cartridge seals installed.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: CA14PT Relocation / Modification (CMR 92-11^c)

Description of Modification: CA14PT was removed from its remote location in the Control Room since the pressure indication it provided was unnecessary at that location. Providing the remote indication was troublesome in that sensing line clogging repetitively due to boron solidification, making the transmitter inoperable. Previous modifications performed via CMR 90-033 installed a reciprocating snubber, increased line size and heat tracing to prevent line blockage due to boron solidification. As a result, it was determined that a local pressure gage installed to provide indication for in-service testing was sufficient to meet needs for testing of the Boric Acid Injection pumps. The change did not adversely affect the overall function or performance and did not fall outside the intended design envelope. More reliable instrumentation has been installed and the indication equipment has been simplified. The local discharge pressure gage provides indication suitable for in-service testing in the range of 0 to 100 PSIG.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: De-automating the Penetration Pressurization System (CMR 92-127)

Description of Modification: The Penetration Pressurization (PP) System was intended to be a leakage blocking system to enhance the leak tightness of selected Reactor Building penetrations. The system was not adequately qualified as a safety system and credit could not be taken for it. The system added considerable complication to the operation, maintenance and surveillance of the process systems to which it was connected. Based on the shortcomings, the remaining automatic functions of the PP system were eliminated.

The 10 CFR 100 requirements for site boundary dose limits are satisfied by an analysis which assumes that containment leakage remains at the design leak rate for 24 hours after a LOCA and then at one half design for the duration of the accident. Leak rate is maintained through performance of periodic Technical Specification surveillance at values less than design. The PP system was not depended upon as a leakage boundary or as an air source. The involved safety grade leakage boundaries are more reliably maintained without the complex electrical and mechanical interconnections. Leak testing on leak prone boundaries was simplified by the modification.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: T-Ave Meter Replacement- RC12TAI (CM 93-067)

Description of Modification: Problems with the reliability of the installed T-Ave meter, a Westcon 2470 series meter, due to potentiometer drift and instability and a demanding calibration process, resulted in replacing the meter with a Westcon Model 2550A digital meter. Replacement of the meter with the new digital model did not affect response and intended design or the overall function or performance of the T-Ave indication. More reliable instrumentation and equipment function were gained.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Flood Line Cover Plate Modification (CMR 93-079)

Description of Modification: To reduce the radiation dose and personnel safety hazard associated with flood line cover plate installation, the Fuel Transfer Canal drain valve SF-V-31 is kept in the open position during plant operation. This eliminates the need to install and remove the cover plate. The change did not involve any new piping materials. The equipment remains consistent with the original construction specifications.

Safety Evaluation Summary: An evaluation of the modification found, based on the information above, that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Replace RPS Transmitter Power Supplies (CMR 94-004)

Description of Modification: The modification replaced existing obsolete Lambda RPS power supplies with a new model. The power supply units provide 28 VDC power for the RPS transmitter loops for RC pressure and flow. The transmitter circuit design was not affected by the modification. The new units were dedicated for the application by BWNS after verification of their critical characteristics and completion of environmental testing on a prototype power supply. Seismic qualification of the power supplies using SQUG methodology was performed and found adequate by GPUN Technical Functions. As a result of these efforts, the power supplies were found equivalent to the originals.

Safety Evaluation Summary: An evaluation of the modification found for the reasons above, that the probability of occurrence or consequence 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 modification. No Unreviewed Safety Question resulted from the modification.

Modification: Reactor Building Sump Remote Installable Test Plugs (CCR 94-036)

Description of Modification: Remote installable test plugs were designed, fabricated and installed instead of the two 14" test flanges previously used on the Decay Heat (DH) pump suction flanges in support of the technical Specification required leak testing of the DH piping. The light weight aluminum plug assemblies are stored outside the Reactor Building during reactor operation where they can be verified as un-installed and not be exposed to the post-LOCA chemical environment. The adapters remain in the

sump, require no periodic maintenance and cause no flow restriction from the DH pump to DH or Building Spray pumps.

Safety Evaluation Summary: An evaluation of the modification found, based on the information above, that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: CRDM Thermal Barrier Replacement (CCR 94-038)

Description of Modification: Replacement of CRDM thermal barriers was performed to improve the slow control rod drop times experienced. An alternate replacement for the current Type A thermal barrier design was found in a modified barrier design. Barriers having larger mechanical clearances between the balls and their valve chambers were installed in four CRDMs. The larger clearances increase the potential for the balls to travel freely within the chambers. The modified barriers adequately limit heat transfer from the RCS to the CRDM internals. The replacement was made without modification to the CRDM Motor Tube. All design functions of the thermal barriers were documented and reviewed.

Safety Evaluation Summary: An evaluation of the modification found that based on the information above, the probability of occurrence or consequence 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 modification. No Unreviewed Safety Question resulted from the installation of the alternate replacement thermal barriers.

Modification: Reactor Coolant Pump Cartridge Seal Installation (CCR 94-049)

Description of Modification: The modification converted the conventional seal packages in RCP-1B and 1C to the cartridge seal design. The RCP seal piping was modified to accept the Westinghouse advanced design cartridge seal. Performance of this CCR completes the seal configuration change to the RCPs. The seal and piping changes provide the same function and performance as the existing equipment. Interface with is unchanged throughout normal to emergency/abnormal operation. The change did not affect any safety system as described in the bases of any Technical Specification.

Safety Evaluation Summary: An evaluation of the modification found, based on the information above, that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Spring Pack and Gear Ratio Changes to MU-V-36/37 (CCR 94-098)

Description of Modification: A higher gear ratio and a larger spring pack were installed in the valves to account for uncertainties and degradation. The operator produces more stem torque with the same motor torque. This also produces a higher thrust which meets the minimum setpoint. The limiter plate was sized to allow the motor operated valve to produce the required thrust without exceeding the torque rating. The structural thrust are not exceeded by setting the torque switches to a value less than the maximum thrust setpoints.

Safety Evaluation Summary: An evaluation of the modification found, based on the information above, that the probability of occurrence or consequence of a

malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Epicor II Radiation Monitor Replacement (CCR 94-101)

Description of Modification: The PING RMS unit installed at ALC-RMI-18 was replaced with a portable Victoreen unit because of its poor maintenance history. The replacement Victoreen unit is a three channel, entirely self contained unit which includes samplers, ratemeters, recorder and sample pump. The replacement unit was connected to existing tubing, tritium sample panel and PPC alarm terminations.

Safety Evaluation Summary: An evaluation of the modification found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: RB-V-7 Gear Ratio Change (CCR 94-102)

Description of Modification: RB-V-7 was modified by installation of a higher gear ratio after calculations showed marginal stem torque was being provided at degraded grid conditions. It was also questionable whether, with an above maximum setting prior to the modification, the valve torque switch would trip during degraded motor conditions. Installation of the higher gear ratio provided more margin and allowed a higher torque switch setting. The change did not modify the function of the original valve design or the system in which it operates. The valve torque limit is restricted by the limiter plate on the torque switch and the structural thrust limits are accounted for when the torque switch is set.

Safety Evaluation Summary: An evaluation of the modification found, based on the information above, that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Spring Pack and Gear Ratio Changes to RR-V-4A/B/C/D (CCR 94-103)

Description of Modification: A higher gear ratio and a larger spring pack were installed in the valves marginal stem torque was being provided at degraded voltage. With the higher gear ratio, the operator provides more stem torque with the same motor torque. The limiter plate was sized to allow the motor operated valve to produce the required thrust without exceeding the torque rating. The structural thrust are not exceeded by setting the torque switches to a value less than the maximum thrust setpoints. The function or the original design purpose of the valve was not changed by the modification. The valves will automatically open under the emergency mode of operation to allow flow to the associated emergency cooling units as before.

Safety Evaluation Summary: An evaluation of the modification found, based on the information above, that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: 1P and 1R Bus Breaker Seismic Restraints (CCR 94-104)

Description of Modification: Seismic Qualification Utility Group (SQUG) screening evaluations identified the need to install side-to-side restraints for the Westinghouse 480 volt, type DB breakers to ensure their capability of satisfying their design function in response to a SQUG event. Seismic restraints were added to specific switchgear breakers to prevent excessive motion during a seismic event. Supports were installed to the back panels in accordance with a design verified calculation and in a manner not to interfere with the electrical operation of the breaker.

Safety Evaluation Summary: An evaluation of the modification found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Spring Pack and Gear Ratio Changes to MU-V-16A/B/C/D (CCR 94-106)

Description of Modification: A higher gear ratio and a larger spring pack were installed in the valves marginal stem torque was being provided at degraded voltage. With the higher gear ratio, the operator provides more stem torque with the same motor torque. The limiter plate was sized to allow the motor operated valve to produce the required thrust without exceeding the torque rating. The structural thrust limits are not exceeded by setting the torque switches to a value less than the maximum thrust setpoints. The function or the original design purpose of the valve was not changed by the modification. The high pressure injection discharge valves will automatically open under the emergency mode of operation to allow flow through the high pressure injection lines to the reactor coolant system.

Safety Evaluation Summary: An evaluation of the modification found, based on the information above, that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: EG-Y-1A/B Solenoid Power Indication (CCR 95-003)

Description of Modification: The change modification installed control circuit indicating lights at the emergency diesel engine mounted relay panels. The lights are of similar design as those installed in the emergency safe-guards control panels. The installation of the power indication lights allows the elimination of the quarterly fast starts of the Class 1E diesels. Overlapping testing is obtained by verification of the loss of DC power to the air start solenoids and the performance of the Technical Specification required monthly diesel run. Diesel emergency safeguards settings will be verified during the monthly run vs. the quarterly fast start. No design change was made to either the emergency safeguards actuation system or the emergency power system, only in the manner in which their function is verified.

Safety Evaluation Summary: An evaluation of the modification found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Pressurizer Missile Shield Removal (CCR 95-026)

Description of Modification: The Pressurizer Missile Shields were permanently removed to improve industrial safety and simplify maintenance activities for components mounted on or near the top of the Pressurizer. The Pressurizer Missile Shields did not provide a required safety function. There are no credible missiles located under the missile shields that could puncture the containment liner because of redundant design features, location/orientation, and/or low striking velocity. The ability of the liner to perform its safety function is not affected. The Pressurizer Missile Shields did not provide a biological shielding function since there is no equipment above them to operate or perform maintenance on. Their removal will improve the working environment for tasks supporting the in-place testing of the Pressurizer Relief Valves by decreasing work area temperatures.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: WDL-V-303 Gear Ratio Change (CCR 95-039)

Description of Modification: The purpose of the modification was to install a higher gear ratio to provide more margin for the WDL-V-303 motor operator. The gearing change allows the operator to produce more stem torque with the same motor torque and allow a higher torque switch setting on a heavier spring pack. The structural thrust limit is not exceeded by setting the torque switches to a value less than the maximum thrust setpoints. The isolation function or the original design purpose of the valve was not changed by the modification.

Safety Evaluation Summary: An evaluation of the modification found, based on the information above, that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Partial Elimination of Reactor Missile Shield Tie-downs (CCR 95-041)

Description of Modification: The modification involved the removal of six of the reactor vessel missile shield seismic/missile tie-downs based on engineering calculations. The calculation found that attachment bolts were not required for the shields to provide protection against the design missile. To prevent shifting, resulting from a seismic event, two of the attachment bolts were determined necessary for each shield. Design criteria are met with the reduced number of attachment bolts in place. Elimination of the six bolts makes the task of removing and replacing the shields during a refueling outage less a personnel safety hazard. The modified bolting configuration does not affect the ability of the shields to perform their intended function; stop a missile. It also does not affect the structural integrity of the shields, their support corbel or the D-Ring.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

Modification: Installation of Open Flow Path (OFF) Thermal Barriers
(CCR 95-045)

Description of Modification: GPU Nuclear replaced thermal barriers in 27 control rod drive mechanisms (CRDMs) during the 11R outage. OFF thermal barriers (one ball check omitted) were installed in the CRDM motor tubes per this CCR. The OFF thermal barriers were desired to ensure the long term performance of the CRDM. This activity was consistent with the long term plan issued to the NRC with respect to CRD drop time performance. An evaluation reviewing the design functions of the thermal barriers and a review of all CRDM design temperature limits with the OFF barrier were performed.

Safety Evaluation Summary: The evaluation of the modification found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased by the change. Though the change affected FSAR descriptions, the design basis and plant Technical Specifications were not affected. Motor tube temperatures were found to remain well below design limits after installation of the OFF barriers. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted.

Modification: OTSG Tube Plugging (CCR 95-062)

Description of Modification: The modification involved the plugging of additional tubes defined by the modification documentation. The plugging activity existing safety evaluations which identify the criteria for plugging and stabilization. Plugging is required for all tubes with defects not isolated by kinetic expansion with greater than 40% through wall detectable indications by eddy current testing (ECT) and those tubes considered for plugging for additional conservatism based on special ECT examination results. Evaluation determined that the removal of at least 1500 tubes from service in each OTSG has no adverse effect on the full power performance of the component. The reduction of flow and heat transfer are insufficient to affect plant safety during transient and accident conditions. Plugs of types referenced were proven by analysis or test to be a reliable means of assuring that the pressure boundary integrity of the OTSG remains intact.

Safety Evaluation Summary: An evaluation of the modification, based on the information above, found that the probability of occurrence or consequence of a malfunction or an accident either previously analyzed or of a new or different type was not increased. No Technical Specification margin of safety was reduced by the modification. No Unreviewed Safety Question resulted from the modification.

change made above

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

Modification: Installation of the Bender Ground Fault Monitor at DC Panel DCA in the 230KV Substation (EJ 1)

Description of Modification: The Bender Ground Fault Monitor was installed on the 1A Station Battery to permit evaluation of the equipment as a replacement for the existing ground fault detection equipment on both the 1A and 1B Station Batteries. The ground fault detection equipment is passive and has no effect on station DC power or plant operation.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reason above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Temporary Power for ISI Test Equipment (EJ 2)

Description of Modification: A 460VAC, 60 Amp temporary power feed was provided for ISI test equipment used to test the Main Feed Pump turbine. The plant was shutdown during the period of power need and motor control center that supplied the power was lightly loaded during the performance of the magnetic particle inspection. There was no adverse effect on plant operation.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Temporary Power to Epicor Building During Re-power Modification (EJ 2)

Description of Modification: Temporary power was made available to the Epicor building by routing power from MCC 2-33A to PDP-W2 for the purpose of providing heat to the building until permanent power was available. No nuclear safety related equipment was affected by this modification.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Bypass Alert and High Alarms for Iodine on RMI-18 (EJ 2, 3, and 4)

Description of Modification: To eliminate nuisance alarms from 2ALC-RMI-18 when the Iodine channel is not required to be in service, jumpers were installed to bypass the Alert and High on the unit's Iodine channel. The unit's particulate and gas channels continued to interface with the Plant Process Computer during the temporary modification; the installation of the jumpers did not impact the unit's ability to monitor radioactive gases and particulates and alarm upon high concentrations.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Bypass of Existing Fan Interlocks (EJ 2, 5, 9 and 10)

Description of Modification: Existing Fuel Handling Building ventilation fan interlocks in Unit 2 were modified to permit exhaust fan operation with only one supply fan operable. The modification was necessary to support PDMS work and avoid a negative building pressure until permanent modifications were made.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Bypass Alarm Card for Fire Zones 17 and 18 (EJ 3)

Description of Modification: A jumper was installed to bypass the alarm card for Fire Zone 17 and 18 to permit operation of the Waste Handling and Packaging Facility (WHPF) ventilation system until a new alarm card is procured. The jumper allows the fire panel to be reset and establish ventilation in the WHPF without making the WHPF detection system inoperable. The system was designed to allow jumpers to be installed within the panel. Fire pump starts are monitored in the control room and are indication of deluge actuation. There are no radiation or ALARA concerns associated with the temporary modification.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Monitoring CRDM Temperatures (EJ 3)

Description of Modification: Six thermocouple cables were routed from control rod drive mechanisms near the reactor vessel head to electrical penetration 217E and connected to a readout on the turbine building side of the penetration. The thermocouples were installed to monitor CRD motor tube extension temperatures to address code related temperature restrictions. The temporarily installed cables are for temperature indication only and have no safety related function.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Temporary Power to Control Panel 18 Alarm Panel (EJ 3 & 4)

Description of Modification: Power was provided to the MUX for Unit 2 alarms monitored in Unit 1. The temporary modification allowed continuous alarm monitoring of the Unit 2 PDMS alarms while the upstream power distribution source configuration was modified and being re-powered. There was no interface with any safety related equipment.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Telephone Equipment Room ATB Outage (EJ 4)

Description of Modification: A jumper was installed between panel 20 and 22 in the Telephone Equipment Room to power offsite phones during the period that the ATB was de-energized in support of 'E' inverter testing.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Temporary Power to the Unit 2 Control Room Lighting During Re-power Modification (EJ 4)

Description of Modification: Temporary power was made available to Unit 2 Control Room by routing power from USS 2-37 to FDP-1E for the purpose of lighting the building until permanent power was available. No nuclear safety related equipment was affected by this modification.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Bypass Turbine Trip on Reactor Trip (EJ 4 & 5)

Description of Modification: A temporary software modification (4) forced the logical point of LSRCT-TP to zero and a temporary jumper (5) installed between cabinet T1298, block 2, terminal 65 to cabinet T1278, block 2, terminal 69. This was done to prevent rod drop time testing in accordance with procedure 1303-11.1 from interfering with turbine shell warming. This jumper was applied during turbine shell/chest warming and prior to reactor criticality. The shutdown margin was not reduced during the performance of the rod drop test procedure. The need not be operable in this plant condition since a turbine induced over cooling transient would not cause reactor criticality.

Safety Evaluation Summary: An evaluation of the temporary modifications found for the reasons above, that the probability of occurrence or consequence 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 temporary modifications. No Unreviewed Safety Question resulted from the temporary modifications.

Modification: Chart Recorder Installation to Monitor Air Compressor Runs (EJ 4 & 5)

Description of Modification: An Amprobe clamp on strip chart recorder was installed at both the 1A and 1B ES motor control centers to monitor A₂ current. Installation of the recorder did not alter the circuit design or its function. The recorder served as a diagnostic tool.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Temporary Power to Lighting Panel TB9 (EJ 5)

Description of Modification: A jumper was temporarily installed to power lighting panel TB9 during the performance of the 1D480VUSS bus outage. The jumper was connected between the 1B480V Turbine Plant MCC and the 1BTP H&V MCC units.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Heat Trace EG-Y-1B Lube Oil Piping (EJ 5)

Description of Modification: Approximately 20 feet of 20 watt/ft heat tracing was spiraled around a 10 foot length of lube oil piping on EG-Y-1B to aid in keeping the lube oil temperature at or above the 90°F alarm setpoint until the diesel jacket coolant heater was replaced. The jumper was installed to prevent unnecessary running of the diesel engine for the sole purpose of elevating lube oil temperatures. The heat trace was installed per manufacturer's instructions and in accordance with seismic Class II, anti-falldown criteria.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Temporary Power to Radwaste Control Panel (EJ 6)

Description of Modification: A jumper was temporarily installed to power the Radwaste Control panel during the cleaning of the 1B Radwaste MCC. The jumper was connected between the 1A and 1B Radwaste cabinets. Installation of the jumper allowed continued cleanup of reactor coolant during the preventive maintenance action.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Temporary Power to the Precoat Control Panel (EJ 6)

Description of Modification: A jumper was temporarily installed to power the Precoat Control panel during the H bus outage. The jumper was connected between the Radwaste Control Panel and the Precoat Control Panel. Installation of the jumper allowed continued cleanup of DH system to reduce personnel radiation exposure.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Provide Power to the Parts Washer in the Machine Shop
(EJ 6)

Description of Modification: Temporary power was provided to the parts washing equipment installed in the Unit 1 Mechanical Maintenance Machine Shop.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Transfer of Component Heaters (EJ 6 & 7)

Description of Modification: Unused heaters were removed from air handling components (Robicon power controller for Auxiliary Building heat in the 348' elevation of the Fuel and Auxiliary Building) and temporarily installed to replace those in AH-E-6B.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Jumper from Plant Process Computer to B&W Instrumentation
(EJ 6, 7 and 8)

Description of Modification: Jumpers were installed from the Plant Process Computer (PPC) to B&W RMAS Reactimeter during physics testing to supply signals of normally active PPC points to the B&W equipment. The PPC points were restored to normal operation following removal of the B&W equipment.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Temporary Heater Operation with a Single Supply Fan Operable in the TMI-2 Auxiliary Building (EJ 7 and 8)

Description of Modification: Temporary jumpers were installed to permit operation of heaters in the TMI-2 Auxiliary Building with only one supply fan energized until the permanent re-power modification was completed.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Verification of Power to LO-P-8A and B (EJ 7 and 8)

Description of Modification: A voltmeter was installed in both the 1A and B Main Feed Pump termination boxes to permit verification that voltage was present on the LO-P-8A and B auto start circuitry. Installation of the

diagnostic equipment was non-intrusive and did not adversely affect or degrade the design operation of the auto-start lube oil pumps. There was no increase in bus loading as a result of the installation of the voltmeter.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Fiber Optics Intrusion Detection System (EJ 9)

Description of Modification: Temporary power was provided to install the Fiber Optics Intrusion Detection System for evaluation of operation and integrity.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Monitoring of Control Room H&V Control Circuit Parameters (EJ 10 and 11)

Description of Modification: A brush recorder was installed on the Control Room Heating and Ventilation Panel to permit monitoring of the control parameters for AH-E-002A and B. Installation of the diagnostic equipment was non-intrusive and did not adversely affect or degrade the design operation of the equipment being monitored.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Fuel Upender Low Hydraulic Pressure Interlock Bypass (EJ 11, 12, 13 and 14)

Description of Modification: During operation, it was identified that the Low Hydraulic Pressure Interlock on the fuel upenders prevented reliable operation. Jumpers were installed to bypass the interlock and improve operability and continue to provide operator warning. The interlock was originally placed in the system to protect the hydraulic pump. Orifices installed in the hydraulic system limit an assembly from falling faster than 15 seconds through 90° of arc on loss of hydraulic pressure. Operator cautions on frame movement with low hydraulic pressure were identified.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Fuel Oil Pump and Valve Operation (EJ 15)

Description of Modification: A jumper was installed between Fuel Oil (FO) level switch 151 and the FO transfer control panel to allow automatic control for FO-P-3A/B, FO-P-2 and FO-V-55. The jumper was necessary because of a broken wire in an underground conduit which served this purpose. The electrical design of the system and the operability of FO-T-1 automatic level control and alarm scheme remained the same.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Power for Temporary Inspection Equipment Loads (EJ 15)

Description of Modification: A jumper was provided between convenience outlet CT-7 and TSI relay power to power temporary loads such as test equipment. Protection was provided by 3 amp fuses. There was no effect on the electrical supply and plant as a result of use of the outlet in this manner.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Computer LAN Connection (EJ 15 and 16)

Description of Modification: A LAN connection for the Digital Turbine Control System project personal computer was made available for use during the 11R Outage.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Swap Nuclear Instrumentation Pre-Amp Inputs for System Troubleshooting (EJ 15)

Description of Modification: The pre-Amp inputs to Nuclear Instrumentation (NI) Detector 12 were swapped to assist in isolation system trouble. The temporary swap of A3 and A4 pre-amp inputs did not affect system operation since the system operates independent of input configuration. There are no Reactor protective features associated with NI-12 wide range operation.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Elimination of CMR-93-043 Loop Resistance (EJ 15)

Description of Modification: A temporary jumper was installed to remove the increased loop resistance which was installed during CMR-93-043. This action was necessary due to the failure of the MU11-FT4 transmitter amplifier board and its inability to drive the 10-50mA signal through the increased loop resistance. The jumper was installed until the faulty amp board was replaced. The flow transmitter is associated with the Reactor Coolant Pump (RCP) leakoff flow and has no safety function. They provide useful data only during RCP startup since they are overranged during normal system operation.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Open WDL-V-535 During Reactor Building Sump Cleaning (EJ 16)

Description of Modification: Relay 71-S1 was jumpered to allow WDL-V-535 to remain open with a low sump level condition during the cleaning of the Reactor Building sump. The plant was in a cold shutdown condition and fuel handling containment integrity was met with the valve open. The normal discharge pathway is maintained to the Auxilliary Building sump.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Temporary Power to Page Panel (EJ 20)

Description of Modification: A jumper was installed to power the plant pages. It was run from a Turbine Building receptacle to PC Breaker 10.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Rod Drop Time Data Collection Via the Plant Process Computer (EJ 21, 25, 27-29, 31-35, 37, 38 and 40)

Description of Modification: The 25% zone reference switch signals from the test jack panel in Control Rod Drive (CRD) logic cabinet 6 were routed to the TMS patch panel cabinets to permit the collection of control rod drop time data via the Plant Process Computer Sequence of Events Monitor during a reactor trip event. The rerouting was accomplished within the CRD and patch panel cabinets since cable already exists. The 25% zone reference switches have no safety related function. The switches are not associated with the control rod or reactor trip string and are for indication only.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Feedwater Turbine 1A Speed Indication Modification (EJ 23)

Description of Modification: Feedwater Turbine 1A speed indication was modified to eliminate erroneous indication by modification of the turbine speed probe signal. The speed indication is not used to control the feedwater pumps. The speed indication functioned as before without the erroneous indication.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Independent Operation of AH-E-91 (EJ 23)

Description of Modification: A jumper was installed to permit the operation of AH-E-91 without the coincident operation of AH-E-90. This temporary modification allowed air flow measurements to be taken at various Control Tower locations with only the AH-E-91 fan in operation. Primary chemistry lab analysis were suspended during the period the temporary modification was in effect and differential pressure was monitored to verify that the laboratory remained in a negative pressure condition.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Remote PCM-1 Indication at Radiological Controls Lab (EJ 24)

Description of Modification: A wire was run from the Fuel Handling Building PCM1 to the Radiological Controls Laboratory to provide remote alarm indication for the instrument at the lab.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: M & I Communications Circuit Ground (LL 1, 2, 3 and 4)

Description of Modification: Leads were lifted in terminal box T1101 on the 281' elevation of the Auxiliary Building to isolate a M & I communication circuit ground in the Reactor Building and prevent it from adversely affecting other circuits throughout the plant. The temporary modification entailed opening four links (lifting leads) to accomplish the circuit isolation. Plant radio two-way communications were used in lieu of the M & I circuit for Reactor Building communication.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Chlorine Detection System Elimination (LL 3)

Description of Modification: The Chlorine Detection System was removed from service due to the elimination of the use of bulk (2000 lb cylinders) chlorine for circ and river water treatment at the plant. Chlorine probes CE-776-1&2 and CE-777-1&2 were deselected for service and removed from their field locations. The TMI Sewage Treatment Plant (STP) uses 150 lb chlorine containers which are below Tech Spec limits and are located greater than 100 meters from the air intake structure. As a result, the TMI-1 Chlorine Detection System was no longer required to be operable. There was also no Cl₂ gas hazard to the control room as defined in the FSAR.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: High Humidity Signal Disabled (LL 5)

Description of Modification: The invalid high humidity signal from GN-HS-30 was causing alarms at L-2-8 and CPT L2369. The invalid alarms were disabled by lifting the lead on GN-HS-30 at terminal 4. Alarm procedure L-28 provides direction for using alternate means of verifying the ducting is dry.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Disable Trip Signal to Feed Pump Turbine (LL 8 and 9)

Description of Modification: The plant interlock trip signals to the feed pump turbines 1A and B were disabled during the 11R outage to permit valve stroking and control system testing. The lead was lifted only during plant shutdown when the feed pump turbine is not required to supply feed water to the OTSGs.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Remote Control for WT-P-18 Stroke Controller (LL 12)

Description of Modification: A remote manual control signal was provided for WT-P-18 stroke controller until the repair to pH controller CW-CT-61 was repaired. The equipment involved has no safety function and there was no adverse impact on plant operation by the temporary modification.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Main Generator Electric Field Isolation (LL 13, 14, 15 and 16)

Description of Modification: During the 11R Outage, it was necessary to provide electric isolation for personnel working on the Main Generator electric field and exciter while providing Relay Technicians opportunity to energize and test the field ground relay. The leads were lifted only during plant shutdown conditions and re-landed prior to restart.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Condenser Sampling System (TMM 3)

Description of Modification: Temporary tubing was installed between SS-V-14P-2 and sample pump SS-P-2 to eliminate the use of piping considered to be the source of air in leakage into the sample system. This modification allowed sampling at point CE-53 to occur and to be done on a continuous basis, while it removed other sample points from service. Equipment affected by the temporary modification had no interface with important to safety equipment and the system function was not changed.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Drain SNT to Turbine Building Sump (TMM 5)

Description of Modification: A potential violation of the NPDES Permit could have resulted from discharge of the Secondary Neutralizing Tank (SNT) due to high suspended solids in the contents. A flange and nipple were installed on the suction flange of WT-P-11 to permit draining of the SNT to the Turbine Building Sump. Draining to the sump would allow the tank content to be returned the Industrial Waste Treatment System for processing prior to discharge. The equipment associated with the temporary modification had no safety impact and the fluid involved was non-radioactive and of neutral Ph.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Hydrazine Analyzer Installation (TMM 5)

Description of Modification: A late model hydrazine analyzer was installed in series with the permanently installed hydrazine analyzer to evaluate the performance of the newer unit by cross check. The new analyzer was connected to sample point CE5.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Moisture Separator Drain Operation (TMM 5 and 8)

Description of Modification: Contaminant concentration in the secondary plant water was reduced by wasting water from the MOP drain water. The MOP drain water was hard piped to drain coolers and then routed by hoses to the Turbine Building and/or Powdex sumps. The amounts of water wasted as a result of this action are 5 gpm per per train operated. Beside reduction of contaminant concentration reduction, higher Ph concentrations in the moisture separator drains may have decreased the probability of iron transport to the OTSJs through the reduction of boron in the secondary system.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Backup Oil Injector Isolation (TMM 6)

Description of Modification: The backup oil injector, on Auxiliary Boiler 1A, was isolated by disconnecting the supply hose and installing a temporary plug. The action was taken to permit operational testing of the boiler by removing the potential from fire due to a fuel oil leak at the backup injector.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Miscellaneous Waste Evaporator Steam Bundle Condensate Sample Point (TMM 6)

Description of Modification: A modification to the sampling lineup was made to reduce the time spent in sampling and radiological dose to personnel obtaining the condensate samples from the Miscellaneous Waste Evaporator (MWE) steam bundle. A valve and tee were installed in the vertical piping of the MWE vent header to permit sampling of the steam bundle condensate. The valve was installed downstream of the steam trap drain and did not affect system operation.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Industrial Cooler Spray Pump and Heater Operation (TMM 7)

Description of Modification: The contact bar on level switch LS763X was held in with a "tie-wrap" to allow operation of the Industrial Cooler spray pumps and heaters until the level switch was repaired. This action defeated the Lo-Lc sump level interlock on AH-C-1B which would de-energize the pumps and heaters on low sump level for the duration of the temporary modification. Manual action was required to maintain normal level in the cooler sump or to shutdown the spray pumps and heaters on receipt of a "AH-C-1B Sump Lvl Lo" alarm.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Use of an O-Ring of Non-designated Material (TMM 7)

Description of Modification: An o-ring of non-designated material was put in service on the fuel oil filter for EG-Y-2 to eliminate fuel leakage during a component operation since an o-ring of the appropriate material was unavailable. The temporary o-ring used was of the proper size and rating for the application. The temporary use of the o-ring had no adverse effect on engine operation.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: EDG Air Start System Blowdown (TMM 7 & 9)

Description of Modification: A higher air flow rate, to assist in clearing rust from piping prior to its entry and fouling of EG-V-16, and safer blowdown capability was provided by the temporary mechanical modification (TMM) of the air start system piping on each Emergency Diesel Generator. A 3/4" ball valve and piping which directed air flow under the deck plates was added down stream of EG-V-55. The new valve and piping were not relied upon to maintain the pressure boundary of the diesel starting air system. The TMM is down stream of the NSR pressure boundary.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Reliable ΔP Indication for "A" Amertap (TMM 8)

Description of Modification: CW-DPS-498A provides indication and backwash control for the Amertap screens. A flow control valve was installed downstream of CW-V-1020A to allow technicians to correct CW-DPS-498A indication when it is necessary to offset excessive negative ΔP across the Amertap screens. The action provided a functional backwash control to prevent collapse of the screens. The system function is condenser cleaning and there are no nuclear safety functions associated with the temporary modification.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Removal of Ionization Detector 1-3 from Service (TMM 9)

Description of Modification: The alarm relay was removed from ionization detector 1-3 to remove it from service. It has been going into an alarm condition each time the pre-heater banks are energized when dust in the ventilation system ducting on the heaters is burned off. It results in the tripping of the pre-action valve in the Waste Handling and Packaging Facility. The remaining in-service detectors provided adequate notification of fire in the facility until permanent changes are implemented.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification Install an Air Jumper to Damper AH- D-69 (TMM 9)

Description of Modification: An air jumper was installed around the operating motor for air handling damper AH-D-69 because of a failed diaphragm in the motor. Installation of the jumper permitted damper operation and the return of fan AH-E-51 to service.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Fire Service Makeup to the Industrial Cooler (TMM 12)

Description of Modification: Fire Service water was used to provide makeup to the Industrial Cooler while the Pretreatment System was out of service. The temporary modification was accomplished by attaching Fire Service hose reel to WT-V-733 at FS-V-119. There was no affect on the normal operation of the Industrial Cooler during the duration of the modification.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Isolation of Miscellaneous Waste Evaporator Vacuum Pumps During Chemical Cleaning (TMM 12)

Description of Modification: The suction of the vacuum pumps on the Miscellaneous Waste Evaporator was isolated using a blank flange. This temporary modification was implemented to prevent water from entering the unit during chemical cleaning operations.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Gaging Concentrated Waste Storage Tank Valves WDL-V-108, 109, 111 and 113 (TMM 13 & 14)

Description of Modification: The temporary modification provided additional mechanical controls to eliminate leakage past the valves on the concentrated waste storage tanks during operation of the Miscellaneous Waste Evaporator. The valves were gaged to keep the contents of the tanks from being back fed to the evaporator.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Blank Flange WT-V-174A Inlet (TMM 17)

Description of Modification: Industrial Waste Treatment (IWT) valve WT-V-174A required replacement and a spare valve was not available. As a result Pump WT-P-32A was removed from service and a blank flange was installed on the inlet to WT-V-174A to permit WT-P-32B operation for IWT regeneration operations.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Instrument Air Bypass of ALC-V-109 (TMM 19)

Description of Modification: A temporary air supply hose was routed from the discharge of ALC-V-044 to the discharge of ALC-V-099 to bypass the non-functional air regulating valve ALC-V-109 in the Chemical Cleaning Building (CCB). The action permitted the water transfers to be made to the CCB.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Installation of Blank Flanges During Temporary Removal of the Reactor Building Exhaust Fan AH-E-7B (TMM 19 & 20)

Description of Modification: Blank flanges were installed on the suction and discharge ducting flanges for the Reactor Building Exhaust Fan, AH-E-7B, temporarily during its removal for inspection and repair. This action allowed the operation of AH-E-7A if required. The Reactor Building Purge Exhaust Fans are not normally operated during plant power operation and have no automatic

function for response to any accident condition. Installing the blank flanges maintains system capability to operate and function as intended.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Main Condenser Sample Pump Priming Capability (TMM 19 and 20)

Description of Modification: A 1" pipe was installed from a connection downstream of SS-V-34 to SS-V-14P-3, a ball valve at the common suction to SS-P-1 and 2. The modification allowed the priming of the two pumps, SS-P-1 and 2, from an acceptable source of condensate at the sample point CE-30. Existing isolation valves were used to maintain isolation during normal operation.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Fire Service Water Supply to Sanitary Trailer (TMM 20)

Description of Modification: A temporary sanitary trailer was supplied with Fire Service water the trailer's sprinklered header to meet insurer needs to provide for plant fire protection and the trailer's fire protection. The connection made did not impact fire service water supply to safety related plant areas. Risk to the plant from fire in the trailer was reduced by making the temporary connection.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Temporary Gagging of HV-V-13A (TMM 21)

Description of Modification: HV-V-13A, the shell side relief valve for the second stage feedwater heater, inadvertently lifted and would not reset. To limit the challenge to the plant's condensate makeup capabilities, it was decided to gag the valve in the closed position. The cross-connect between the two second stage feedwater heaters was verified open and operation of HV-V-13A, if necessary, provided over pressure protection for both heaters.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: 'C' Clamps on Lube Oil Filter Housing (TMM 23)

Description of Modification: Temporary repairs were made to a lube oil filter housing for FW-P-1B after a stud was broken during maintenance activities on the unit. A replacement stud was not available and two 'C' clamps were installed on the filter housing in the area of the broken stud to prevent oil leakage until a replacement stud was installed.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Feed Pump Foundation Oil Drip Tray Installation (TMM 23 and 24)

Description of Modification: Oil drip trays were installed on the feed pump foundations to minimize/eliminate oil slip/fire hazards from continuous puddle formation on the 305' elevation of the Turbine Building. There was no effect on component operation and no interference with nearby plant components as a result of the temporary modification. EER 94-0405 made the installations permanent.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Auxiliary Boiler Fuel Oil Supply (TMM 23 and 25)

Description of Modification: Two temporary hoses were used to provide continued fuel oil supplies to the Auxiliary Boilers from the 200,000 gal tank instead of the 50,000 gal tank while the underground normal fuel oil supply piping was being cut and capped.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Pump Contents of NS-C-1C to NR Backwash Line (TMM 23 & 31)

Description of Modification: A Sandpiper pump was temporarily installed to pump out the contents of the river side of NS-C-1C and discharge them to the Nuclear River backwash line. The temporary modification was made to limit the amount of water to be processed by the miscellaneous waste evaporator. The cooler was out of service during the operation and the capacity of the pump had no impact on the NR backwash piping or normal system operation.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Operational Check of AH-E-91 (TMM 24)

Description of Modification: The pin in the linkage for damper AH-D-L was pulled to fail the damper in its open position. This allowed checking the ability of AH-E-91 to adequately provide ventilation and cooling to additional spaces not normally serviced by the fan. Although air supply patterns were changed by this action, they were of no consequence since the area is outside the Control Room habitability boundary.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Sensor Guard and Water Stop Disk Check (TMM 25)

Description of Modification: The sensor guard and water stop disk were installed on the end of the AH-CE-209 detector to ascertain their ability to reduce the calibration drift of the MSA Combustible Vapor Monitor. The ability of the monitor/detector combination continued to perform its intended function of measuring for combustible gas and alarming locally and in the Control Room when high levels are detected. The sensitivity of the instrument was not affected.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: OTSG Bubble Test Preparatory Activities (TMM 29)

Description of Modification: To permit bubble testing of the OTSGs with nitrogen to a pressure greater than 105 psig, it was necessary to remove NI-V-118 and install a pipe plug temporarily. Adequate pressure protection was provided by the 160 psig relief valve on the pressurization rig as required by the controlling procedure 1106-16.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Vent Header Isolation During Weld Repairs (TMM 32)

Description of Modification: Due to the need to eliminate pressure buildup in piping during weld repair, temporary isolation of the liquid waste disposal (WDL) cation vent line was accomplished by gagging check valve WDL-V-434 in the closed position.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Circulation Water System Piping Flush to Rid System of Possible Hydrolazing Debris (TMM 32, 33, 34, 43, 44 and 45)

Description of Modification: To eliminate possible damage/clogging of the vacuum pump coolers from debris remaining after the hydrolazing of the circ water system, the circ water piping was flushed at VA-P-1A/B/C and VA P-2A/B/C with the associated coolers disconnected.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: NS-P-1A Operation with Discharge Check Valve Inoperable (TMM 40)

Description of Modification: Valve NS-V10A was disassembled for repairs; the swing arm and disc were removed. To allow operation of NS-P-1A, the valve was temporarily closed without the internals installed and repairs completed. The valve as assembled would not prevent reverse flow through the pump. This was not a concern since only the pump in series with the valve was operated while the modification was in effect.

Safety Evaluation Summary: An evaluation of the temporary modification found that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.

Modification: Self-clamping Strike Plate for Spent Fuel Bridge (TMM 74 and 75)

Description of Modification: The Spent Fuel Bridge strike plate was temporarily modified by addition of a self-clamping strike plate to permit the bridge trolley to access the upender/basket corridors with the control mast (TMM 74) and the fuel mast (TMM 75) without bypassing safety interlocks. The existing strike plate was inadequate to permit the necessary movements. The interlocks remain in operation to prevent bridge and/or basket damage during operation in the upender/basket corridors. It also eliminated the need to rely solely on operator vigilance to prevent such damage.

Safety Evaluation Summary: An evaluation of the temporary modification found for the reasons above, that the probability of occurrence or consequence 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 temporary modification. No Unreviewed Safety Question resulted from the temporary modification.