1981 Changes, Tests and Experiments Made Pursuant to 10 CFR 50.59

FC #247
This Facility Change modified the miniflow lines to the auxiliary feed water pumps.

SAFETY EVALUATION SUMMARY
This modification increased the margin of safety and is not an unreviewed safety question.

FC #407-1
This Facility Change covered the modification of the Sprinkler System additions required by the Fire Protection project.

SAFETY EVALUATION SUMMARY
The additional sprinklers and flow alarms were installed to provide additional fire safeguards and reliability of the existing system, increasing the safety of plant equipment.

FC #407-2
This Facility Change covered the installation of smoke detectors for the Fire Protection modification project.

SAFETY EVALUATION SUMMARY
Failure of the equipment installed will not directly impact the health and safety of the public. No equipment, walls, or penetrations were degraded, thus no unreviewed safety question exists.

FC #407-9
Under this modification Fuel Oil tanks were removed from the intake structure to reduce the fire hazard to surrounding equipment, and a new building was constructed to house new fuel oil tanks for fire pump diesels. This modification was done in connection with Fire Protection modifications.

SAFETY EVALUATION SUMMARY
The fuel oil tanks were relocated far enough away from the intake structure wall to prevent damage to the wall in the event of a siesmic event. Thus the consequences of an accident are decreased.

FC #407-10
This Fire Protection modification covered the installation of Fire Curtains and Trap Doors for the HVAC System.

SAFETY EVALUATION SUMMARY
The design of this modification prevents the spread of a postulated fire into safety related areas through the HVAC system, increasing the margin of safety in the plant.

FC #407-13
This Facility Change was to fabricate and install penetration seals, barriers and fire stops in associated safety related areas.

SAFETY EVALUATION SUMMARY
The installation of the above equipment, coupled with good work practices and use of applicable procedures decreases the probability or consequences of an accident.

FC #407-14C
This Facility Change as part of the Fire Protection modification added new DC Distribution panels, DC Fuse Panels and isolation switches in the Battery Room.

SAFETY EVALUATION SUMMARY
This modification will not adversely affect the design, operation or function of any equipment important to safety. The above equipment is located in an area with greater fire resistency, thus increasing the margin of safety.

FC #407-14D
This portion of the Fire Protection modification rerouted the 1-2 Emergency Diesel Generator feeder.

SAFETY EVALUATION SUMMARY
This modification does not increase the probability of an accident or malfunction of equipment important to safety.

FC #407-16
This modification covered the installation of Lube Oil Leakage Collection and Detection Systems on all 4 Primary Coolant Pumps.

SAFETY EVALUATION SUMMARY
The margin of safety is increased by this modification by the ability to monitor leakage and the installation of specific reservoirs.

FC #431
Under this modification a tie in was installed to link the Feedwater Purity Building Compressor Air line to the Station Instrument Air header.

SAFETY EVALUATION SUMMARY
This modification provides an additional source of Air supply to the station header, which increases its reliability.

FC #444
This facility change covered the modification of Dilution Water to the Condenser.

SAFETY EVALUATION SUMMARY
The probability or consequences of a Liquid Waste incident are not affected by this modification. In the event of one of the new 30" lines rupturing at the beach, the consequences would be less than that of the existing larger lines.

FC #454
This modification changed the power supply of a Control Room Ventilation fan, which resulted in the 2 Control Room Ventilation fans being on different power sources.

SAFETY EVALUATION SUMMARY
The result of this modification is that the 2 fans are now on different power sources. This decreases the probability of an accident or malfunction of the Control Room Heating and Air Conditioning system.

FC #468-2
This Facility Change covered the modification of Containment Isolation logic.

SAFETY EVALUATION SUMMARY
This modification lowers the probability of radioactive material releases during a LOCA, thus the consequences of an accident are reduced.

FC #468-3
This Facility Change covered the installation of automatic initiation and control of auxiliary feedwater flow.

SAFETY EVALUATION SUMMARY
This modification reduces the possibility of operator error (failure to start auxiliary feedwater pumps after a complete loss of feedwater flow to the Steam Generators), thus the reliability of equipment important to safety is increased.

FC #468-4
This Facility Change was initiated to upgrade the Auxilary feedwater flow indication.

SAFETY EVALUATION SUMMARY
This modification added to the reliability and redundancy of the feedwater flow indication, and does not increase the probability of occurrence or the consequences of an accident or the malfunction of equipment important to safety.

FC #475
This change added a supplementary valve inside containment at Containment Penetration 65 on the Instrument Air Lines downstream of the filters.

SAFETY EVALUATION SUMMARY
The addition of this new check valve increases Containment isolation capability.

FC #487
This Facility Change installed High Point Vents on the Reactor head and pressurizer, and replaced the manual isolation valves, a flow restricting orifice and double isolation solenoid valves as required by NUREG 0578 supplementary letter of 9-13-79.

SAFETY EVALUATION SUMMARY
This modification lowered the possibility or consequences of an accident where a gas bubble is produced in the Reactor vessel. The vent path is safety grade and meets or exceeds the qualifications accepted for the Reactor Coolant System at the time of licensing.

FC #495
This Facility Change modified the 125 Volt DC system relays.

SAFETY EVALUATION SUMMARY
This modification improved the margin of safety in the DC system and improved the detection of equipment malfunction.

FC #510-2
This Facility Change modified the 4 LPSI Manual operated valves to enable them to be motor operated and controlled from the Control Room, as well as being manually operated. Two of the valves also had a jogging capability added.

SAFETY EVALUATION SUMMARY
The modification of these valves was siesmically evaluated to ensure that they meet applicable loads without a loss of function. The possibility of an accident or malfunction was not increased, and the margin of safety is not decreased.

FC #483
This modification relocated Containment Air Cooler Solenoid Valves above LOCA Event submergence level.

SAFETY EVALUATION SUMMARY
The probability of equipment malfunction or the consequences during accident conditions are reduced as this modification relocated the Valves where submergence will not occur.

SFC #407-14B
This Facility Change added an alternate feeder and isolation switches to Service Water and Charging Pumps in the event of a fire in the Cable Spreading Room.

SAFETY EVALUATION SUMMARY
This Modification provides fire safeguards and additional reliability of existing plant systems important to the safe shutdown of the plant. Thus the margin of safety is increased.

FC #445-2
This Facility Change covered the installation of Motor Operators on MSIV Bypass Valves to allow operation of these valves from the Control Room as well as from the local valve position. These valves, although not covered by the FSAR, are part of the Main Steam System with class 2 requirements.

SAFETY EVALUATION SUMMARY
This modification had no adverse effect on the Main Steam piping system per a stress and siesmic analysis performed for said piping.

FC #435-D
This modification replaced the position Encoder on the refueling machine with a new encoder system since the original one was obsolete.

SAFETY EVALUATION SUMMARY
The new encoder system will be more reliable thus reducing the probability of occurrence of a malfunction.

FC #435
This Facility Change covered the modifications to the lower sections of the Hoist Box Assembly including the TV Camera mount, spreader and air cylinders.

SAFETY EVALUATION SUMMARY
The Air Cylinders installed is of a more durable design, the TV Camera mount is more rigid, and the new spreader design should decrease the risk of jamming full bundles. Therefore reliability is increased and the probability of malfunction is decreased.

FC #435-A
This Facility Change involved three modifications to the refueling machine.
1) Modification of the cable arm to allow pretensioning of the hoist cable on its drain.
2) The addition of a support bracket to allow installation of the new TV Camera system
3) Installation of a silicone impregnated Hoist Cable to allow smoother winding.

SAFETY EVALUATION SUMMARY
The 3 modifications covered by this F.C. were designed to increase reliability of equipment and reduce the probability of malfunction.

FC #435-B
This portion of the Refueling Machine Refurbishment replaced the TV system, consisting of a new camera with annular lighting and a new monitor in the Control Console.

SAFETY EVALUATION SUMMARY
This new TV system was installed to facilitate better viewing of the Reactor Core resulting in increased accuracy in positioning the machine over the fuel bundles. Therefore the reliability of equipment is increased and the possibility or consequences of an accident are decreased.

FC #435-C
This portion of the Refueling Machine Refurbishment covered the modification to the electrical wiring in the Power Center and Control Console.

SAFETY EVALUATION SUMMARY

This modification has no affect on refueling machine operation, therefore the consequences of an accident or malfunction of equipment is unchanged.

FC #458

This Facility Change replaced the existing ILRT Sensors with new RTD's and Dew Cells.

SAFETY EVALUATION SUMMARY

The sensor Junction Boxes were installed using approved welding procedures are siesmically qualified. The probability of an accident or malfunction of equipment was not increased because of this modification.

SFC #79-087

This Field Change replaced the Valve Body of CV-0522B with a functionally equivalent substitution.

SAFETY EVALUATION SUMMARY

The probability of an accident or malfunction of equipment important to safety is not increased as the new valve body is an exact replacement and is covered by a certificate of conformance.

SFC #79-117

This Field Change refurbished the piping associated with the Containment Purge valves siesmic accumulators by modifying the method of assembly of the air supply system.

SAFETY EVALUATION SUMMARY

This modification was intended to improve the leak tightness of the system. The margin of safety is not reduced and no unrenewed safety question exists.

SFC #80-051

This Field Change was initiated for repairs to MSIV disc to disc arm for CV-0501 and CV-0510.

SAFETY EVALUATION SUMMARY

MSIV's disc to disc arm attachments perform a function in the event of a Main Steam Line Break. The repairs performed increase the reliability of this function and the margin of safety is increased.

SFC -80-002 (BAG system)	SFC-80-029 (MSS system)
80-004 (CCS system)	80-031 (PSC system)
80-012 (CVC system)	80-038 (RWS system)
80-015 (DMW system)	80-042 (SFP system)
80-019 (ESS system)	80-045 (SWS system)
80-022 (FPS system)	80-048 (VAS system)
80-023 (FWS system)	

The SFCs listed above reflect modifications of Siesmic piping supports to enable the systems to meet the original design criteria based on stress analyses of actual as built configurations performed. (Re: NRC IE Bulletin 79-14).

SAFETY EVALUATION SUMMARY
Modifications of these piping supports enables the systems to meet original safety analyses, therefore the margin of safety has been increased.

SFC #80-065
This Field Change replaces gum rubber seals for the Containment Emergency Escape Lock with functionally equivalent seals made from E.P.D.M. material.

SAFETY EVALUATION SUMMARY
E.P.D.M. material is equal to or better than Gum Rubber when used in a static radiation environment. No unresolved safety question exists and the margin of safety is not decreased.

SFC #80-069 and SFC #80-70
These Field Changes added spotfaces and bumpers on MSIV CV-0510 and CV-0501 disc arms.

SAFETY EVALUATION SUMMARY
This modification prevents crushing of washers and allows the disc to seat. The probability of an accident is not increased and consequences of an accident or malfunction of equipment is decreased.

SFC #80-073
This modification added a spacer to the internals of MSIV CV-0510.

SAFETY EVALUATION SUMMARY
The addition of the spacer allows the disc to seat, thus the margin of safety is increased.

SFC #80-075
This modification installed isolation valves and test connections to enable testing of Containment Penetration 17 and 48.

SAFETY EVALUATION SUMMARY
By the addition of the isolation valves and test connections the integrity of the system can be proven, thus the margin of safety in increased.

SFC #80-076
This Field Change was initiated to change the size of the Locking Pin through small nuts and studs in MSIV's CV-0501 and CV-0510 disc to disc arm.

SAFETY EVALUATION SUMMARY
The size change of the Locking Pin does not affect the function of the MSIV's, therefore no unreviewed safety question exists.

SFC #80-113
This modification added Nitrogen Bottles as a source of Siesmic reserve air for the Control of Containment Air Room purge valves.

ation of Palisades Fuel after a core average burnup.

SAFETY EVALUATION SUMMARY
The occurrence of fuel Handling consequences or probability were not increased by the use of this procedure.

Special Test Procedure T-94 -
Visual Inspection of Core Loading
This approved plant procedure was used to verify the loading of the Reactor Core Vessel using an underwater TV camera to read fuel assembly serial numbers and verify their orientation for cycle 5 and to provide safety precautions to prevent fuel damage.

SAFETY EVALUATION SUMMARY
Fuel is not moved by this procedure; therefore, the potential for a fuel handling accident is not increased.

Special Test Procedure T-95
Initial Approach to Critical for a New Palisades Core

The operational steps performed in this procedure are bounded by present safety analyses for the original and subsequent new cores.

SAFETY EVALUATION SUMMARY
This procedure was used in conjunction with approved Plant Operating Procedures, providing additional surveillance and control of a critical approach. The probability of occurrence, or the consequences of an accident or malfunction of equipment was not decreased.

Special Test Procedure T-141 -
Low Power Test Program for Palisades Core 5
This approved plant procedure was used to obtain Reactor parameters and compare these values with Technical Specifications requirements, and predicted values, and was used as a guideline for the proper sequence of the following Special Tests:
T-142 - Base Power Level Selection
T-143 - Zero Power Isothermal Temperature Coefficient Measurement
T-144 - Zero Power Rod Worth Measurements
T-145 - Zero Power Synmentry check.

SAFETY EVALUATION SUMMARY FOR T-141, T142, T143, T-144, and T-145
The use of these plant approved procedures did not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety.

For Special Tests T-142, T143, T-144 and T-145 see Safety Evaluation summary for T-141.

Special Test Procedure - T-142
Base Power Level Selection
This procedure was used to determine an acceptable power level range for the performance of low power physics tests.

SAFETY EVALUATION SUMMARY
By adding this supplementary pneumatic source of reserve air independent of the station Air Compressors the margin of safety is increased, and no unreviewed safety question exists.

SFC #81-105
This Field Change covered the replacement of flange gaskets on the SIRW Tank. Specification information was not available for the replaced gaskets. The new gaskets have a 150# pressure rating as set forth in the ANSI standards.

SAFETY EVALUATION SUMMARY
The probability of malfunction of equipment was not increased and the margin of safety was not decreased by this Field Change.

SFC 81-111
This Field Change replaced the PCP Oil Leakage collection system tanks T108A, B, C, and D and associated alarm systems in connection with the Fire Protection System modifications.

SAFETY EVALUATION SUMMARY
Larger tanks capable of holding all the oil from the PCP motors were installed using siesmic criteria and in compliance with Appendix R to 10CFR50. The margin of safety was not affected, and no unreviewed safety questions exist.

SFC #81-123
This Field Change was performed to replace diesel generator start motors with a new type per Vendors instructions.

SAFETY EVALUATION SUMMARY
The new motors are functionally equivalent to the original equipment. Thus no unreviewed safety question exists.

SFC #81-170
This Field Change resulted in a Weld Buildup of CV-3036 to meet fit-up requirements to new Check Valve 3411 (S.I. discharge).

SAFETY EVALUATION SUMMARY
The weld build up was performed using a special weld repair procedure, properly prepared and approved. The probability of an accident or malfunction of equipment relative to safety is not increased.

SFC #81-192
This Field Change modified the CRDM #19 Coupler.

SAFETY EVALUATION SUMMARY
The modification does not affect the structural integrity of the Control Rod support coupler, or the locking ability of the coupler to the Control Rod. An unrenewed safety question does not exist.

Special Test Procedure T-86 -
Visual Inspection of Palisades Irradiated Fuel Assemblies
This approved plant procedure was used to provide guidelines for a visual examin-

Special Test Procedure - T-143

Zero Power Isothermal Temperature Coefficient Measurement

This procedure was used to obtain a measured value of Isothermal Temperature Coefficient at near zero power and to compare it to predictions.

Special Test Procedure - T-144

Zero Power Worth Measurements

This special test was run to measure the worth of various Control Rods in different configurations and compare the results with predicted values.

Special Test Procedure - T-145

Zero Power Symmetry Check

This test procedure was used to determine the degree of symmetry of the core.

Special Test Procedure T-147

Water Hammer Test

This approved Plant Procedure covered a Water Hammer Test on the feedwater piping connected to the B Steam Generator at 200 psi and 900 psi on the secondary side.

SAFETY EVALUATION SUMMARY

This procedure was run following a feedwater line modification. The results concluded that the probability and consequences of a feedwater hammer were decreased.