50-255 CE PALISADES

1996 ANNUAL REPORT OF FACILITY CHANGES, TESTS, AND EXPERIMENTS

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ATTACHMENT

CONSUMERS ENERGY
PALISADES PLANT
DOCKET 50-255
DOCKET 72-7

1996 ANNUAL REPORT OF FACILITY CHANGES, TESTS AND EXPERIMENTS

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Engineering Assistance Requests (EARS) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0216	EAR-96-0081	"Remove LI-1301, LI-1302, and LI-1307" - The basin level indicators for the screen house are leaking mercury and are not currently used. This Engineering Assistance Request evaluates their removal and the capping to the instrument lines. The indicators are not used and not safety related. Currently Operations use floats to determine level. Because the instruments are not used, and because their removal reduces the number of plant components that may fail, neither the probability, nor the consequences of an accident are increased.
96-0501	EAR-96-0129	"Turbine Lube Oil Room - Replace West Wall Siding with a 2-Hour Fire Rated Wall" - Replaces siding in the pipe gallery area of the west wall of the lube oil room with a fire rated masonry wall. This was originally an exterior wall but, with the addition of feedwater purity building, became an interior wall and, as such, is required to be a fire barrier. The replacement wall has two hour fire rating per NFPA and Factory Mutual. This reduces the probability and consequences of a fire in the lube oil room. No other systems are affected.
96-0568	EAR-95-0119	"Removal of DPIA-1130" - This Engineering Assistance Request removes the indicator and alarm, and abandons DPT-1130 in place. The dirty waste filter F-53 is no longer used and therefore the indication and alarm for high dP is not required. The Liquid Waste Incident (FSAR Section 14.20) is not affected, as the dirty waste filter is not used. Neither the probability, nor the consequences of an accident are increased.

Engineering Assistance Requests (EARS) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0571	EAR-96-0084	"Eye Wash Station at Cooling Tower Acid Sheds" - The emergency showers at the cooling towers are being removed since acid is no longer used as an additive to the Circulating Water System. The showers are shown on FSAR Figure 9-14 because the source of water is the Fire Protection System. The shower locations will be isolated by closing manual isolation valves, and the pipe ends will be capped. The presence or absence of these showers has no effect on nuclear safety.
96-0576	EAR-96-0229	"Replace MV-SW224" - Replace a gate valve with a ball valve as approved by the applicable Piping Class Sheet. The valve isolates service water to the cooler for the steam generator blow down radiation monitor. The replacement valve is a ball valve, whereas the old valve was a gate valve. This required an update to the Piping and Instrument Diagram, which is also a Figure in the FSAR. Nuclear safety is not affected because the valve has no accident mitigation function. It is normally open and is used only for maintenance isolation purposes. The valve's design pressure rating meets the design rating of the system.
96-0749	EAR-96-0149	"Replace V-9C Roll-O-Matic Filter with Cartridge Filters" - The motor operated roll filter for the Turbine Building supply fan V-9C is being replaced with a stationary filter. Since this filter is shown on a figure in the FSAR, an FSAR update is required. An unreviewed safety question does not exist because turbine building fans have no bearing on accident prevention or mitigation.
96-0907	EAR-96-0336	"Removal of FQI-1339A and FQI-1339B from Service due to Obsolescence of Equipment" - Non-functional flow indicators for chemical injection into the circulating water system are being removed. The indicators are shown on FSAR Figure 10-6 Sheet 1. An Unreviewed Safety Question is not created because chemical control of the circulating water system has no bearing on nuclear safety.

Engineering Assistance Requests (EARS) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1016	EAR-96-0374	"Removal of FI-2603B from Service Due to Constant Maintenance Problem Due to Wrong Range Size" - Removes instrument because the plant has no use for it. This measures non-critical service water flow to the SG blow down heat exchanger. The possibilities of accidents or malfunctions are reduced by removal of unused/non-functioning equipment.
96-1079	EAR-96-024	"Add a ½" 3000# Threaded Union Fitting Upstream of Valve MV-FW604" - This union will facilitate easier removal and reinstallation of MV-FW604. Currently, this valve cannot be unscrewed from the pipe without disassembling the valve due to interferences with adjacent valves. Probabilities and consequences of malfunctions are not increased, as the union installation meets all applicable design requirements. System operation is not affected.
96-1274	EAR-96-0436	"Remove Wall in Access Control" - A nonstructural wall in access control is being removed to improve traffic flow in the area. Radiological area status sheets are currently mounted on this wall. Removal has no effect on HVAC performance. Thus no consequences of accidents are affected.
96-1293	EAR-96-0456	"Removal of FI-2603A from Service due to Constant Maintenance Problem due to Wrong Range Size" - This instrument is not sized properly and is not used. This measures non-critical service water flow to the SG blow down heat exchanger. The possibilities of accidents or malfunctions are reduced by removal of unused/non-functioning equipment.

Engineering Assistance Requests (EARS) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1922	EAR-96-037	"Add A Vent Valve to Main Condenser Inlet Water Boxes" - This Engineering Assistance Request will install two 8 inch gate valves on existing flanges located on the south condenser water boxes. Valves will be used to vent the tube side of the condenser during draining. The probability of a malfunction will not be increased. The valves remain closed during normal operation and condenser failure is not a part of an analyzed accident.
96-2109	EAR-96-0365	"T-50 Sample Valve Maintenance" - Adds ball valve MV-SFP618 to provide double isolation for a sample line downstream of MV-SFP617. Valve MV-SFP617 leaks by and replacement is not feasible because isolation of this line is difficult. This sample line is on the outlet of the spent fuel pool demineralizer. The probability of a malfunction is not increased, as the valve is in a non-Q part of the system. No new flow paths or failure positions are created by this change.
96-2440	EAR-96-0724	"Steam Generator E-50A Tube Plugging" - This Engineering Assistance Request is being used to document the Safety Evaluation to plug 4 steam generator tubes in E-50A using the administrative process detailed in EM-09-05, "Steam Generator Inservice Inspection." Engineering Manual, EM-09-05 requires that WO be initiated, and verify with the Reload Design Supervisor that the analyzed plugging limit will not change for next cycle, verify Technical Specifications flow measurements will be done, and documents are revised. EMF-95-016, Palisades Cycle 12 Safety Analysis Report allows up to 15% of the total tubes in the steam generators to be plugged (with a maximum difference of 9% between generators). The total percentage of tubes plugged in both steam generators will be 3.78%. Probabilities and consequences of accidents are not increased.

Engineering Assistance Requests (EARS) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-2619	EAR-96-0786	"Approval for Installation of Ultrasonic Flowmeter in Non-Critical Service Water Header" - This flowmeter will be used for collecting data concerning non-critical service water flow for trending purposes. It is installed exterior to the header and has no impact on the service water system. The flowmeter is independent of any plant equipment except that it is strapped to the exterior of the non-critical service water header in the turbine building. It will not increase the probability of malfunction of any plant equipment.

Facility Changes (FCs) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0077	FC-966	"Conceptual Design of Steam Supply to Auxiliary Feedwater Steam Turbine (K-8) Modification". This design package is intended to remove various problem valves in the steam supply to the Turbine Driven AFW Pump and replace the valves with two steam control valves capable of good steam control and isolation. The consequences of an accident are not increased. The modifications to the steam feed to the turbine driven Auxiliary feedwater pump, will improve reliability. Possibilities of malfunctions are correspondingly reduced.
96-0674	FC-966	"Upgrade Steam Supply to Auxiliary Feedwater Pump Turbine Driver K-8" - This is Revision 1 to the Safety Evaluation which adds discussions of issues raised during detailed design of the modification. Specifically added to the Safety Evaluation are discussions regarding the addition of two safety valves to the scope of this facility change and discussions concerning potential failures of new valve positioners.
96-1368	FC-966	"Upgrade Steam Supply to Auxiliary Feedwater Pump Turbine Driver K-8" - Revision 2 adds items added to the design package since initial review of the FC package. The most significant item added involves the two relief valves. These relief valves will provide full pressure relief capability, preventing failure of the moisture separator, in the event that both steam supply valves fail open.
96-1728	T-FC-966-03	"Auxiliary Feedwater System Post FC-966 Installation High Steam Pressure Test Procedure" - This test procedure tests the modified AFW Turbine Steam Supply at normal Main Steam pressures. The test will start and operate the system in the various design alignments and normal and off normal transient conditions. Testing will be completed within the normal auxiliary feedwater LCO. Operability will be demonstrated at low power.

Facility Changes (FCs) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1754	I-FC-966-01	"Auxiliary Feedwater Steam Supply System Modification" - This procedure provides instructions for the control, demolition and installation of affected mechanical, electrical and control components associated with FC-966, "Auxiliary Steam Supply To K-8 Turbine Drive Modification." There is no interface with safety equipment during pre-outage work. Work on safety related equipment will take place when that equipment is not required (at cold shutdown). The probability of a malfunction is not increased by the installation of this modification.
96-2735	T-FC-966-02	"Auxiliary Feedwater System Post FC-966 Installation Low Steam Pressure Test" - This revision to the test procedure incorporates changes associated with Primary Coolant System operation during the test period. Revision allows operation with shutdown cooling isolated and pressure control maintained through operation of the atmospheric steam dump valves. These operations are allowed under Technical Specifications although one electrically driven AFW train will be under an LCO. The redundant electric flow path will be operable. Therefore the consequences of a malfunction of equipment important to safety are not increased.
96-0255	FC-958	"Diesel Fuel Oil Transfer System Upgrade" - Replaces oil storage tank T-10 with a larger tank (T-10A) to meet 7 day supply requirement for emergency use. Also, the tank and fuel oil piping supply system is being upgraded to General Design Criteria 2 (Protection Against Natural Phenomena) and CPCo Design Class 1 requirements. The capacity of the new tank is 50,000 gallons and will provide a substantial fuel inventory margin for design basis loading. The connecting piping system is being upgraded and the tank will be cathodically protected. The probability of a malfunction of equipment is not increased.

Facility Changes (FCs) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1052	FC-958	"T-10A Diesel Oil Tank Installation (GWO 6013) Moving Existing Soil" - This is a safety evaluation that was written to document that the decision to store contaminated soil on-site was made by considering past approval by the NRC to store on-site soil of a much higher activity. The soil and location are independent of plant equipment and conditions. The activity of the soil is much lower than the NRC 10CFR20.302 approved buried in place soil at the South Radwaste area. The soil will meet the criterion of less than 1 mrem/yr at the site boundary.
96-2146	T-FC-958-01	"Test Procedure For The Fuel Oil Transfer System Upgrade" - This test procedure tests the installation of the fuel oil system as it relates to FC-958, "Fuel Oil Tank T-10A Installation." Procedure test scope includes tank instrumentation and testing of new piping associated with the system modification. Because the transfer system is not single failure proof, alternate methods are provided for refilling the day tanks when the transfer system is not available. Contingency materials will be stored near the old tank, and a truck will be on site for filling the new tank. Thus the consequences of accidents previously evaluated will not be affected by the testing of the transfer system.

Facility Changes (FCs) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1018	FC-961	"Reactor Cavity Drain Line Modification" - This inserts stainless steel canisters containing ceramic pellets into the two one inch reactor cavity drain lines to restrict the flow of corium into the sump in the event of a reactor vessel breach. The pellets have a melting temperature on the order of 3400 degrees F and are stable under normal operating and design basis accident environmental conditions. The canisters are designed to withstand an instantaneous blast load from the reactor vessel coincident with a seismic event. The canisters are designed to permit normal water drainage. This modification addresses an NRC commitment. The drain lines do not have any active components. Additionally the Reactor Cavity Flooding system is not included in the mitigation of any design basis event. A core melt/reactor vessel bottom failure is not a design basis event. The possibilities of a malfunction of a different type are not increased.
96-1465	FC-961	"Reactor Cavity Drain Line Modification" - Safety Evaluation is being revised to Revision 1 to reflect EDC-FC-961-01 which changed the canister material from Teflon to stainless steel.
96-1020	FC-956	"Reload Q Cycle 13" - This facility change for cycle 13 consists of loading 60 new Q fuel assemblies, 56 once burnt P assemblies, 20 thrice burnt N's, and 8 thrice burnt M assemblies with a SS pin in the core shroud corners. Fuel in the reactor will be inspected by in-mast sipping and reconstituted if necessary. This is a preliminary review since the safety analyses, accident analysis and the Deposition of Events are not yet completed by Siemens. The safety evaluation will be revised when they have been received and reviewed.

Facility Changes (FCs) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-2685	FC-956	"Cycle 13 Reload Design Safety Evaluation" - This is a revision of the Cycle 13 safety evaluation. The safety evaluation is being revised because several analyses were performed for cycle 13 as a result of the Disposition of Event for cycle 13. The evaluation 1) discussed the increase in pellet density, 2) discussed reconstitution of assembly O-47 for a failed and "loose" rod, 3) added report numbers of Siemens reports that support and justify cycle 13 operation, 4) discussed the sections of the FSAR that must be revised as a result of cycle 13, and 5) added a discussion why Palisades is not directly affected by the NRC's concerns with Siemens LOCA methodology. The conclusion of the safety evaluation that operation of Cycle 13 does not involve an unreviewed safety question is not changed by this revision.
96-2524	FC-969	"Containment Air Cooler VHX-4 Inlet & Outlet Valve SIS Position Change" - Facility Change isolates the VHX-4 inlet valve, CV-0869, and opens the outlet valve, CV-0867, on an SIAS. Both channels of Safety Injection Actuation Signal (SIAS) are being used in the actuation of each valve. Currently, only CV-0867 actuates on a left channel SIAS. The failure modes on loss of air or power of the valves are also being changed so that CV-0869 fails closed and CV-0867 fails open. The above actions are being taken in response to the Generic Letter 96-06 and they will prevent a water hammer in VHX-4 during a DBA. The valves have been qualified for post-LOCA operation and this FC does not change that qualification. VHX-4 still is isolated on SIS actuation, so system operation remains the same. The probability and consequences of equipment malfunctions are not increased.

Functional Equivalent Substitutions (FES) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0418	FES-96-064	"Replace MV-CRW245" - Replace the isolation valve for the Pressure Control Valve on the vent line from the Equipment Drain Tank to the Waste Gas Surge Tank. The old valve was prone to seat leakage. The replacement valve is a ball valve, whereas the old valve was a gate valve. This required an update to a Figure in the FSAR. Nuclear safety is not affected because the valve has no accident mitigation function. It is normally open and is used only for maintenance isolation purposes. The valve's design pressure rating meets the design rating of the system.
96-0425	FES-96-065	"Replace MV-FW808" - Replace globe valve in feed pump P-1A suction line drain with a ball valve. The existing valve leaks by. This valve is normally closed and performs no safety function. As long as it meets the pressure ratings, it cannot affect the possibilities or consequences of equipment important to safety.
96-0595	FES-96-047	"Replace Escape Air Lock Test Connection, MV-VA-P6" - "Replace Escape Air Lock Test Connection, MV-VA-P6" - This modification replaces the existing 2" gate valve with a 1" ball valve and adds a reducer. The design and operation of the test connection is not affected. The configuration currently meets Appendix J test requirements but is not up to current industry standards. Also, the current configuration may not meet Appendix J requirement to which Palisades will be committed in the future. The modified configuration will meet these future requirements. No new types of accidents or malfunctions are created.

Functional Equivalent Substitutions (FES) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0658	FES-96-066	"Replace MV-HED50016"- Replace valve on moisture separator drain tank drain line which leaks by. Changing to a ball valve will not create the possibility of a new type of failure. The valve still has the potential for seat leakage and pressure boundary failure.
96-0700	FES-96-093	"Replace ST-0575 and YS-0501 (Main Steam Stop Valve Number 4)" - Replace existing steam trap and strainer with an integrated unit. The existing steam trap is badly eroded and repair is not feasible. The function of the trap/strainer is not changed. No new types of failures or malfunctions are created.
96-0822	FES-96-100	"Replace MV-ES3417"- Install a ball valve in place of existing globe valve. The existing valve has a galled stem/bushing and cannot be operated. This valve provides isolation for dPI-0319C, which measures differential pressure across containment spray pump P-54C. Changing to a ball valve will not create the possibility of a new type of failure. The valve still has the potential for seat leakage and pressure boundary failure.
96-0957	FES-96-118	"Replace MV-ES3414" - This installs a ball valve in place of an existing gate valve which has a galled stem and bushing and cannot be operated. This valve isolates DPI-0319A, which is on the discharge of containment spray pump P-54A. Changing to a ball valve will not create the possibility of a new type of failure. The valve still has the potential for seat leakage and pressure boundary failure.

Functional Equivalent Substitutions (FES) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1211	FES-96-102	"Incore Instrumentation Assemblies." - This FES changes the design of the reactor incore detectors such that they will be able to be reinserted after a refueling. The probability of an accident will not increase. The new tensile wire around the rhodium and core exit thermocouple elements provides extra strength, so that insertion and withdrawal can happen without damage to the assemblies.
96-1247	FES-96-141	"Replacement of Penetration MZ-1A Purge Air Exhaust Test Isolation Valve MV-VA506" - Existing one inch carbon steel valve cannot be operated and will be replaced with a functionally equivalent valve. The existing valves are gate valves and not properly shown on plant P&IDs. The possibility of malfunctions are not increased as the failure modes for gate versus globe valves are not significantly different.
96-1258	FES-96-043	"Replace MV-ES3234, MV-ES3234A, MV-ES3237, and MV-ES3348A with Top Entry Ball Valves" - This FES replaces gate valves currently used in this containment isolation function (Safety Injection Tank drain isolation and sample valves) with top entry ball valves. The existing valves have galled stems. The possibility of malfunctions are not increased as the failure modes for gate versus ball valves are the same.
96-1350	FES-96-132	"Removal of Pressure Indicators PI-3403 and PI-3404 from Personnel Air Lock and Escape Air Lock" - This change removes unnecessary indicators and replaces them with pipe caps. The possibility of a malfunction is not created because no safety function relies on these gages. The pressure boundary is maintained by the caps, and gauge removal will simplify air lock maintenance.

Functional Equivalent Substitutions (FES) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1410	EDC-FES-96-045-01	"Change BCB-4-3/4" Line Classification to CC-10-3/4" - The classification of the piping section which contains the reactor vent valves MV-PC1060B,C, and D is being changed from BCB to CC, which is consistent with the remainder of the PCS. This system was originally classified BCB because it was a generic design installed at many CE plants. This change in classification means that piping will be required to be schedule 80 rather than 160. Review of PCS pressure and temperature design requirements indicates that schedule 80 piping is acceptable (EA-SP-77021-01). This change is necessary because the vent valves being installed under FES-96-045-01 do not have sufficient socket connection thickness to meet a schedule 160 pipe weld requirement. The piping is not subject to an active failure. The proposed class conforms to FSAR Section 4.8 description of the reactor. The probability of an accident will not be increased.
96-1659	FES-96-122	"Replacement for Obsolete Transmitters FT-1050 and FT-1051" - This FES replaces the entire control loop for each transmitter (flow from treated waste tanks). The loops are updated to 4-20 ma dc signals and square root functions are performed by the transmitters. These are non-safety related transmitters that replace older less reliable instruments. The probability of a malfunction of equipment important to safety is not increased.
96-1684	FES-96-168	"Replace MV-CVC2086" - This FES replaces the manual globe Volume Control Tank Drain Valve with a ball valve. The globe valve has a hot spot and it is easier to replace it than to repair it. The ball valve exceeds the pressure/temperature rating of the system and has been proven more reliable for leak tightness. The possibility of a malfunction of a different type is not created

Functional Equivalent Substitutions (FES) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1921	FES-96-172	"Replacement of Valve MV-DE120 from a Gate Valve to a Ball Valve" - The existing 1 ½ inch gate valve leaks by and will be replaced with a ball valve. This valve is on the starting air system of the 1-2 diesel generator. The possibility of malfunctions is not increased as the failure modes for gate versus ball valves are the same.
96-1948	FES-96-187	"Replace P-39A/B Bearing Cooling Water Outlet Valves" - Replaces existing Walworth, OIC, and Williams valves with NIBCO valves. They are being replaced because they are obsolete, they are of unknown condition, and the piping that contains these valves is being replaced. These valves service cooling tower pumps, a non-safety related service. Further these are normally open valves that only need to provide a pressure boundary. There is no increase in the probability of malfunctions of equipment important to safety. And no new malfunctions are created.
96-2494	FES-96-233	"Replace MV-CA310 and MV-CA311" - Replace Turbine Building to Safeguards High Pressure Air Isolation Valves. The existing globe valves leak and will be replaced with ball valves. These valves are normally closed and perform no accident mitigation functions. They only allow cross tieing high pressure air systems. The possibility of malfunctions is not increased as the failure modes for ball versus globe valves are the same.

FSAR Change Requests for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0208	FSAR Change Request	FSAR Change Request - The FSAR incorrectly states that the nitrogen bottle stations supply nitrogen at 90 psig. The stations are actually set at 80 psig and have been so since the stations were installed. Additionally, the facility change package that installed the stations intended a set point of 80 psig. An FSAR Change Request with an erroneous set point following completion of the installation in 1987 resulted in this error. A 90 psig setting would not allow the nitrogen system to be a backup. This would increase nitrogen usage and possibly mask problems with instrument air. The probabilities and possibilities of malfunctions of equipment important to safety are not increased.
96-0243	FSAR Change Request	FSAR Change Request "CV-0939 Condensate to Shield Cooling Valve" - FSAR Table 5.8-4 and Figures 6-6 and 9-2 erroneously show CV-0939 as a gate valve. Per walk down, it is actually a globe valve. This is a change in description only, no changes have been made to the plant. The possibility of malfunctions are not increased as the failure modes for gate versus globe valves are not significantly different.
96-0307	FSAR Change Request	FSAR Change request to widen pH range for the operation of the Volume Reduction System. This change is for waste processing and doesn't affect any accidents or equipment important to safety, malfunctions, or margins of safety.
96-0311	FSAR Change Request	"FSAR Changes From CCP Discrepancy Reports"- This FSAR change request to Table 1-2, and Sections 8.3.5.2 and 8.3.3.2 corrects inverter ratings, adds solid state breakers as a trip device and deletes sentence that says inverter voltages and amps are logged daily. No unreviewed safety questions are created by these changes since no accidents, malfunctions or margins of safety are affected by these FSAR changes.

FSAR Change Requests for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0332	FSAR Change Request	FSAR Change Request to "Appendix 7C". This FSAR change adds safeguard bus and transformer metering to Appendix 7C to meet the requirements of RG 1.97. These are category 2 per Table 3 of that document. Changing the RG 1.97 category of an instrument has no effect on the operation and reliability to the instrument itself. This change does not affect any probabilities or possibilities of malfunction.
96-0381	FSAR Change Request	FSAR Change Request to revise Table 5.2-3. This changes the status of the service water break detector in Table 5.2-3 from 1E to non 1E. These instruments monitor for a break in the service water supply to the containment air coolers. The detector does not perform a safety function as there are other indications that are relied on to perform this function. It is not a RG 1.97 system. The instruments are required in the current Technical Specifications but only as a predictor of future maintenance needs. They are not included in the proposed standard Technical Specifications.
96-0517	FSAR Change Request	This FSAR Change Request removes data regarding temporary load criteria from the FSAR per corrective action. This criteria allows use of a decreased seismic input when evaluating temporary loads on piping. The PRC had approved the addition of this criteria to the FSAR. Subsequently, a CR was written to remove this criteria from the FSAR based on a letter from the NRC to Commonwealth Edison stating that criteria such as this may not be used without prior approval of the NRC.
96-0524	FSAR Change Request	FSAR Change Request to correct a position title error in Chapter 5 on plant organization and corrects a typo in Chapter 12.

FSAR Change Requests for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0600	FSAR Change Request	Change FSAR 11.4.2.5 to delete requirements for South Radwaste building if not used for High Integrity Container storage, and adds dewatered concentrates in HICs as waste form. Allows dewatering secondary resins to the turbine building sump. The turbine building sump is sampled and monitored to detect primary to secondary leakage released to mixing basin outfall. The secondary resin collects some of this activity and prevents it from entering the environment. Returning a liner volume to the same waste path is consistent with design. The consequences of accidents or malfunction are not increased.
96-0667	FSAR Change Request	FSAR change request to "Feedwater Regulating." - Removes the rate specification for feedwater pump ramp down. The figure is wrong and is not a required number by accident analyses. Probabilities and consequences are not increased because direct operator intervention is required by EOP-1. Accidents involving operation of feedwater pumps remain unchanged.
96-0696	FSAR Change Request	FSAR Change Request to accommodate programmatic changes and enhancement to the methods. Updates environmental program. This is an update to correct small errors that have accumulated through equipment and program changes. No significant changes in ALARA or the radiation monitoring/protection program have occurred. Thus the consequences of accidents and malfunctions are not increased.
96-0999	FSAR Change Request	"Withdrawal of Revision to Surveillance Capsule Removal Schedule" Delete the reference to 1/10/96 request to the NRC for revision to capsule removal schedule in FSAR Table 4-23 since the request has been withdrawn.

FSAR Change Requests for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1021	FSAR Change Request	FSAR change request "FSAR Pressurizer Parameter Changes." - The rounded off pressurizer volume and weight in the FSAR of 1500 cubic feet are being corrected to the exact numbers in the Combustion Engineering vendor manual to avoid confusion on the value to use for analyses.
96-1049	FSAR Change Request	FSAR change request for "ODCM SIRW Tank Limit." - Points out that the Offsite Dose Calculation Manual allows the limit for the SIRW tank radio nuclide concentrations to be exceeded as long as the limiting concentration is restored within 48 hrs, per the action statement. The activity estimate for the SIRW tank rupture only addresses tritium which is large percentage of the activity but a low percentage of the dose to the public, and is not a meaningful evaluation basis. This interpretation of the limit will not allow 10CFR20 dose limits to the public to be exceeded, thus no consequences of malfunctions will be increased.
96-1289	FSAR Change Request	FSAR Change Request "CHP Testing." - Changes the FSAR to reflect that present testing has shifted some functions of tests and that SIS (safety injection) is verified by RT-8C and RT-8D. RO-12 (tests Containment High Pressure) only verifies the SIS signal. This change does not reduce the level of testing and all functions are still verified.
96-1444	FSAR Change Request	"Incorrect Explanations of Boron Concentrations for Refueling Exists in Several Sections of the FSAR" - This changes FSAR Chapters 3, 6,13, and 14 to change statements that 1,720 ppm Boron is adequate for 5% shutdown. To expand the description that during refueling, the PCS is borated to at least 1,720 ppm Boron, AND enough to be 5% shutdown with all rods withdrawn. No plant parameters or operating requirements are being changed. The FSAR is merely being aligned with Technical Specifications.

FSAR Change Requests for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1482	FSAR Change Request	"Update AMMS Databases For POS-0770/0771 And SV-0770/0771" - The equipment associated with these valves has been erroneously listed as RG 1.97 Category 1 required equipment, because they are included in the Technical Specifications Table 3.6.1 as containment isolation valves. They are not containment isolation valves. Containment boundary is provided by the internal surface of the steam generators. The second boundary is provided by the first isolation valve, which meets the requirements of Appendix A Criterion 57. There is no possibility of an accident or malfunction of a different type as these valves will still close on containment isolation. This change only removes them from the RG 1.97 required list in FSAR App. 7C.
96-1484	FSAR Change Request	"Final Safety Analysis Review, Section 5.8.2" - Removes the detailed description of the elastomeric coating on the containment dome from the FSAR. The FSAR currently says that the coating consists of three coats of neoprene and 2 coats of hypalon for a total thickness of 20 mils. This type of detail is not necessary and there are no requirements regarding the coating. Also, this does not allow for variations in the coating due to repair activities. This statement will be revised to simply say that the dome is covered with an elastomeric coating. The containment dome coating remains unchanged. It is not used to mitigate the consequences of an accident and only serves to protect the containment for long term effects of exposure to weather. The possibilities of an malfunction or a new accident are not increased.
96-1498	FSAR Change Request	"Engineered Safeguards Testing - FSAR Change Request" - Adds to FSAR 7A.1.1.1 description that QO-2 verifies containment sump valve opening. This change makes Appendix 7A consistent with the rest of the FSAR. There is no change in operation of the plant. The change involves description of QO-2 only and does not affect probabilities, possibilities, or margins.

FSAR Change Requests for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1742	FSAR Change Request	FSAR change request "CCP Design Issue-Missing Information, Statement to NRC in 1969 Air Coolers are 100% Backup for Sprays." - This FSAR changes the description of the containment air coolers to show the air coolers are not redundant to the containment spray system, but are independent. This change resolves a discrepancy between Section 9.3.3.1 and Chapter 14. This change is not an unreviewed safety question because the NRC has previously reviewed this issue and approved Tech. Spec. reflecting the fact that the air coolers are not redundant.
96-1753	FSAR Change Request	"Wiring Discrepancy P-76A" - This FSAR Change request shows that the canal sample pump, P-76A, is powered from a local lighting panel and not from an instrument AC panel. The wiring was changed to improve voltage regulation at the motor terminals. The pump does not interface with any plant system that could impact reactor operation or system that is required to operate to mitigate an accident. Possibilities of malfunctions or accidents are not increased.
96-1926	FSAR Change Request	"FSAR Change Request to Correct Errors Regarding Minimum Inventories for the Condensate and the Primary System Make-up Storage Tanks" - Errors were found regarding the minimum inventories for these tanks stemming from FSAR changes made under FC-954. The FSAR Change Request inserts the correct minimum inventories for these tanks. The margin of safety is not reduced. The required condensate inventory of at least 100,000 gallons of condensate as required by Technical Specification 3.5.1 will be maintained.

FSAR Change Requests for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1935	C-PAL-96-0911	"Revise FSAR Table 8-5" - Table was revised to delete inverter output harmonics description. The level of acceptable output harmonics was evaluated in EA-D-PAL-94-091, and FSAR needs to be updated to remove erroneous information. The probability or consequences of a malfunction of equipment important to safety is not increased. The inverters have been evaluated and tested to determine that the operation with the present level of harmonics is not detrimental to connected plant equipment.
96-2050	FSAR Change Request	"Actuator-operated Throttled Valve Parameter" - This FSAR Change Request adds a footnote to Table 4-12 that explains that the value of 280 gpm given for pressurizer spray valve maximum flow is the maximum flow through one spray valve. This is an editorial change. Plant operation is not changed. Having more spray flow than the maximum for one valve will not reduce the ability of the sprays to mitigate the effects of an accident.
96-2213	FSAR Change Request	"Qualification Requirements of Key Staff Positions in the Support and Nuclear Operations Organizations" - The FSAR requirements are being revised to eliminate the confusion in the FSAR section that has requirements for key positions (which refers to CPC 2A). This section also had requirements that applied to review and audit functions, which have been moved to FSAR Section 12.4, "Review and Audit." The possibility of an accident of a different type is not created. The change in requirements for most employees is not significant. they are still adequately qualified to perform their normal tasks. This does not affect any plant equipment or operating procedures.

FSAR Change Requests for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-2214	FSAR Change Request	"Revises a Statement in the FSAR Regarding QO-38." - Appendix 7A in the FSAR states that QO-38 full stroke tests the containment sump isolation control valves and the check valves, but QO-38 only tests the check valves. The control valves are tested by QO-2. This change corrects the description of testing. All components are tested, and no changes in testing have occurred in the plant. The possibilities of any new accidents or malfunctions are not increased.

Miscellaneous 10CFR50.59 Evaluations for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0164	COLR	"Core Operating Limits Report Revision 2" - The COLR is being revised to change the reference from the current Cycle 12 Safety Analysis report to "current cycle" Safety Analysis, correct a grammatical error, and revise the shutdown margin requirement to read "The reactor shall not be made critical with a control rod position lower than the insertion limit for zero power on Figure 2.2." Figure 2.2 is the PDIL vs power curve. The requirement was being misinterpreted. Too much boron was being added beyond what safety analyses or the FSAR required. Concurrence of this was requested and received from the Reactor Engineer and the Reload Design supervisor. The margin of safety is not reduced. The plant will still be operating within the bounds of the safety analysis. No Chapter 14 events are changed. The required shutdown margin is always present even with the most reactive rod out of the core. The shutdown boron concentration curve still provides the required shutdown margin.
96-0788	SM-1-8	10CFR72.48 Safety Review - "Welding Procedure Specification - SMAW Carbon and P8 Stainless Steel" - This is a temporary change to exempt the weld between the 2" vent assembly and the MSB shield weld from the 200 degree F preheat requirement for the unloading of MSB-4. 50 degrees F will be the requirement for the unloading. SM-1-8 will be used for this weld. The welds for welding the shield lid closed (carbon to carbon) during the loading procedure presently do not require preheat. This temporary change is not a safety question because it has been demonstrated in qualification for the cask loading welding procedures that preheat was not necessary.

Miscellaneous 10CFR50.59 Evaluations for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1792	C-PAL-96-0982	"Isolation of Hotwell Fast Makeup Valve CV-0733" - CV-0733 is shown in plant drawings as in service. This safety evaluation of operating the plant with CV-0733 isolated, determined this is not an unreviewed safety question because the valve is not assumed or required to operate during any accidents or malfunctions described in the FSAR.
96-2072	C-PAL-95-1541	"Missing or Incorrect Information in the DBD 2.05" - Creates an FSAR Change to correct discrepancies between the FSAR and other documents. Changes involve labeling of flow sensors and the description of the range of wide range neutron monitoring instruments. No functions, normally used ranges, or set points are affected. Therefore, there are no decreases in safety parameters identified in 10CFR50.59.
96-2703	SO-54	Revision to "Palisades Plant - Operating Requirements Manual." - The standing order is being revised to reflect Technical Specification Amendment 172 for operability requirements above 300 degrees, and increase the allowed containment pressure from 1.0 psig to 1.5 psig when at Hot Shutdown or below. The margin of safety is not reduced. For the containment response analyses, the margin of safety is the difference between the containment design pressure of 55 psig and the failure pressure (>100 psig). Since the results of the limiting pressure cases with an initial pressure of 1.5 psig remained below 55 psig, the margin is unchanged

Miscellaneous Engineering Analyses (EAs) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0041	EA-TSCR4.3	"Relaxation of Primary Coolant Pump Motor Flywheel Inspections" justifies the elimination NDE flywheel inspections at refueling intervals. The CEOG analysis demonstrates the ability of Palisades' flywheels to withstand all significant operating loads well beyond plant life. The maximum undetected flaw will not grow to critical size during normal pump operation or under pump over speed conditions during plant life. The analysis was completed assuming a 150% over speed during a Reactor Coolant System break at the discharge of the pump. Based on this, the probability of a flywheel malfunction is not increased.
96-0114	EA-APR-95-007	"10 CFR 50 Appendix R Fire Safe Shutdown Analysis" - This calculation evaluates the effect of a fire in each fire area of the plant on the ability to achieve safe shutdown. The results of this calculation will be incorporated into the Fire Protection Program Report as well as plant operating procedures. Evaluated malfunctions have changed in specific fire areas for specific components. Systems and components used to accomplish safe shutdown functions have changed, but the overall methodology has not changed. Nor has the ability to achieve safe shutdown following a fire been compromised. Therefore there are no changes to the consequences of any malfunctions.
96-0415	EA-PTS-96-01	"Evaluation of Westinghouse and AEA Fluence Reports" - This re-evaluates past fluence data and concludes that the reactor vessel has accumulated less fluence than previously reported. This affects the date at which the vessel reached the screening criteria as defined in 10CFR50.61. The amount of fluence the vessel has accumulated affects the date when the PTS screening criteria is met. Until the screening criteria are met, there are no unreviewed safety questions. The margin of safety is unaffected.

Miscellaneous Engineering Analyses (EAs) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1213	EA-SP-03324-02	"Piping Stress Analysis For The Spent Fuel Pool Cooling" - This analysis evaluates the spent fuel pool cooling piping from valve MV-SFP123 to the fuel tilt pits with the temporary spool piece between valves MV-SFP123 and MV-SFP3263 removed. The analysis concludes that the piping meets FSAR design requirements. This analysis shows that the system meets FSAR design criteria with or without the spool piece installed. Thus the probability of malfunction will not be increased with the spool piece removed.
96-1362	EA-BWB-96-01	"Heat Balance Calculation Using the Ultrasonic Flow meter Measurement Device" - This Engineering Analysis supports use of the Ultrasonic Flow meter to correct the feedwater flowmeters used as input to the calorimetric heat balance in the Palisades Plant Computer. This EA also evaluates changing T-AVE to 560 degrees F at 100% power. Both of these changes will not create an unreviewed safety question because the plant will be operating within licensed limits for power and reactor inlet temperature.
96-1545	EA-TAM-96-04	"Offsite Radiological Dose Consequences of a Cask Drop in the Spent Fuel Pool" -The cask drop accident was reanalyzed to determine if the site dose consequences were within limits after including ventilation system leakage paths documented in C-PAL-96-0789, "Potential Airborne Releases in VRS [Volume Reduction System] and VRS Barrel Storage Areas", and C-PAL-96-0956, "Failure to Follow Intent of Refueling & Heavy Load Movement Technical Specifications." The analysis showed that the site boundary and off-site doses remained within acceptance limits when ventilation leakage is assumed and that no unreviewed safety question exists.

Miscellaneous Engineering Analyses (EAs) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-2102	EA-GEJ-96-01	"A-PAL-94-324 Containment Spray System (CSS) Sensitivity on Containment Heat Removal During Recirculation (Post RAS)" - This Engineering Analysis determines the containment pressure and temperature resulting from a large break LOCA with updated HPSI, LPSI and containment spray flows. The replacement containment air cooler performance is also modeled. This analysis demonstrates that containment design pressure is not exceeded by the limiting LOCA. The temperatures predicted are less than the EEQ temperatures. Therefore the probability of malfunctions is not increased.
96-2299	EA-GEJ-96-04	"Update Containment Response to a MSLB" - This Engineering Analysis revises the Main Steam Line Break containment pressure analysis and EEQ reference analysis. Reduced containment spray flows, and new air cooler heat removal rates are used. A case is also performed to show that containment pressure can be at 1.5 psig at hot shutdown and the peak containment pressure resulting from a MSLB will be less than containment design pressure. The temperatures predicted are less than the limiting EEQ temperatures. Therefore probabilities of malfunctions are not increased.

Miscellaneous Engineering Analyses (EAs) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-2320	EA-GFP-96-02	"Owners Review - ABB/CE Small Break Loss of Coolant Accident (SBLOCA) Design Bases Analysis 001-ST96-C-006" - This Engineering Analysis documents the CPCo review of the Combustion Engineering SBLOCA analysis that was performed to create a Palisades specific analysis. Previously, the licensing basis was based on Calvert Cliffs analysis. The predicted peak clad temperature was 1992 degrees F which is less than the 2,200 F limit but is 52 degrees more than the value in the FSAR. This is being reported to the NRC per 10CFR50.46 .a.3.ii. The analysis demonstrates conformance to Criteria 1 through 4 of the ECCS performance acceptance criteria of 10CFR50.46 for Palisades. The consequences of an accident are not increased.
96-2393	EA-A-PAL-96-011	"Calculation of Spent Fuel Pool Cooling System Design Heat Load" - Calculates the spent fuel pool cooling system maximum heat removal capability and determines a bounding pool loading scenario for the calculated cooling capacity. This analysis assumes that fuel transfer from the reactor does not begin prior to nine days following reactor shutdown. It supersedes a previous analysis performed in 1990. This analysis is an improvement over the 1990 analysis in that it determines the maximum heat removal capability of the cooling system whereas the 1990 analysis verified that the fuel pool cooling system could cool a worst case fuel pool load. Thus, the 1990 analysis did not truly determine that maximum cooling capacity of the system. The FSAR will be updated to reflect the new analysis. The calculated heat load to the component cooling water and subsequently to the service water system is not greater than the maximum heat load on entering cold shutdown. Additional conservatism has been assumed, and the heat removal capacity design limit with one active failure has been decreased. This has not increased the probability or consequences of any accidents.

Miscellaneous Engineering Analyses (EAs) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-2683	EA-TAM-96-07	"Owner's Review-Palisades Updated Steam Generator Tube Rupture Analysis, ABB/CENO Calculation No. 001-ST96-C-007, Rev. 00" - This Engineering Analysis is the owners review of the ABB/CENO analysis that was done using a lower, less conservative initial PCS Iodine level (Technical Specification limit), and a corrected pressurizer computer model. A case was done that used some HPSI flow for pressurizer spray to eliminate reliance on the charging pumps. The results of the HPSI spray case cannot be used until flow rates assumed for HPSI spray flow are justified by analysis. The consequences of this event remain below the limits specified in 10CFR100 and the recommendations of SRP 15.6.3. They are not increased.
96-2788	EA-GEJ-96-06	"Minimum Aux Feed Requirements for All Aux Feed Pumps" - Engineering Analysis determines the minimum acceptable auxiliary feedwater pump flow for any aux feed pump when the required flow rate is achieved within 200 seconds after AFAS. The new acceptable flow rate is 280 g.p.m. This is a reanalysis of a previously analyzed response. It demonstrates that the ability of the auxiliary feedwater system to remove decay and pump heat while controlling PCS pressure and temperature within acceptable limits. No consequences of any accident are increased.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-0037	QO-21	Rev of "Auxiliary Feedwater System Valves, Inservice Test Procedure" - Deletes CV-0525 from stroke time testing. This valve provides a vent path for AFW alternate steam supply piping. Since the valve is normally closed and has no safety function in the open position, stroke testing is not required by the Code.
96-0043	MO-38	Rev of "Auxiliary Feedwater System Pumps Inservice Test Procedure." Revision deletes use of tachometer in Attachment 3, which was deemed unnecessary by Operations. Statements that were duplication of statements in previous sections were eliminated, breaker numbers and key numbers were added, method of determining P-8C recirculation flow rate was changed to determine net recirculation rate, vibration limits were revised so accuracy was consistent with relief request, and a requirement for an SRO review at the end of each section was added. Testing of plant equipment is performed within the limitations of Technical Specification Chapters 3 and 4. IST is designed to discover degraded or failed components prior to any effect on operability, and these discoveries will not result in consequences greater that those evaluated in the FSAR.
96-0067	RT-122	Rev of "Inservice Test Program Check Valve Disassembly and Inspection Program" - Adds check valves to the procedure that cannot be tested at accident flow conditions. Past operability of these valves has been addressed. Containment sump check valve testing is being removed from this procedure since inspection and assembly is no longer required. The valves can now be tested in accordance with the Code due to modifications performed in the 1995 Refueling Outage. This revision also updates procedure to the 1989 Edition of the Code.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-0158	ONP 15	New procedure "Emergency Power Reduction." - This procedure was created to provide guidance for rapid power reductions as a result of SOER 94-01 and will replace ONP 3 and ONP 14 which covered power reductions due to a loss of feedwater and condenser vacuum. This procedure specifically permits boric acid injection as an alternative to control rod insertion. The consequences of an accident previously evaluated will not be increased, as all NSSS parameter are maintained within the assumptions of the Chapter 14 analyses. PCS inventory would be limited to analyzed pressurizer level, or the reactor would be tripped.
96-0267	AP 3.00	Rev of "Plant Licensing Department Organization and Responsibilities." - Revised to reflect reorganization and change in departmental assignments. These changes were incorporated in FSAR Revision 18 under 10CFR50.59.
96-0333	AP 3.01	Rev of "Plant Review Committee." - Revises procedure to be consistent with the plant reorganization. These changes were incorporated in FSAR Revision 18 under 10CFR50.59.
96-0408	EPS-E-7	Rev of "Local Tending of 2.4 KV Bus 1C Switchgear." - The procedure was revised to add a link that needs to be opened to isolate the control circuitry for Low Pressure Safety Injection pump (P-67B) breaker in the event of a fire in certain Auxiliary Building hallways. The need for the revision was identified by review of operating procedures which may be used to cope with 10CFR50 Appendix R scenarios. Nuclear safety is not affected because this link isolates a standby start feature of the pump which is not used during normal operations (SOP 3), and also would not be used in any accident scenario.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-0409	EPS-E-8	Rev of "Local Tending of Diesel Generator 1-2 (K-6B) and 2.4 KV Bus 1D Switchgear." - The procedure was revised to add a link that needs to be opened to isolate the control circuitry for Low Pressure Safety Injection pump (P-67A) breaker in the event of a fire in certain Auxiliary Building hallways. The need for the revision was identified by review of operating procedures which may be used to cope with 10CFR50 Appendix R scenarios. Nuclear safety is not affected because this link isolates a standby start feature of the pump which is not used during normal operations (SOP 3), and also would not be used in any accident scenario.
96-0460	FPSP-AE-4	Rev of "Emergency Lighting Unit Duration Test and Circuit Adjustments." - The procedure was revised to change trending methods and to add a minimum voltage acceptance criterion after the 8 hour test duration. Nuclear safety is not affected because the Emergency Lighting Units are only used to cope with 10CFR50 Appendix R fire scenarios. These fire scenarios are specifically assumed to not occur concurrently with a Safety Analysis (FSAR Chapter 14) event.
96-0476	SOP 21	Rev of "Fire Protection System." - This revision addresses a possible failure to perform a proper safety review of past procedure revision. The concern involved the temporary connection of the Fire Protection System to the Non-Critical Service Water by way of a Service Water Booster Pump discharge when the Jockey Pump is removed from service. This connection was contrary to FSAR which required use of a main fire pump when the Jockey Pump is removed from service. The scope of the Safety Analysis also includes an FSAR change to allow the use of the Booster Pump connection

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-0602	RO-105	Rev of "Full Flow Test for SIT Check Valves and PCS Loop Check Valves"- Procedure updated to reflect PCS and system conditions for 1996 refueling outage test. Specifically, system conditions changed to allow testing with fuel in reactor vessel. Also, position indication testing for each Safety Injection Tank discharge isolation valve is now performed in RO-105 to accommodate requirements in ASME Section XI, 1989, Edition which became effective following the 1995 refueling outage.
96-0720	FHS-M-34	10CFR72.48 Safety Review - Rev of "Unloading the Multi Assembly Sealed Basket." - Procedure revised to incorporate lessons learned during mockup of the unloading process and to address NRC comments. The margin of safety will not be reduced as the pressure boundary is not affected and the level B allowable pressure will not be exceeded during the cooling process.
96-0780	AP 4.00	Rev of "Operations Organization, Responsibilities and Conduct." - Procedure was revised to reflect changes in the plant organization, minor changes in the duties of Control Room personnel, and changes in miscellaneous administrative requirements. A Technical Specification Change Request was previously submitted to change the title of the Plant Operations Superintendent to Shift Operations Supervisor. Nuclear safety is not affected by a title change.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-1026	RE-83A	Rev of "Modified Performance Test - Battery No. ED-01." - Battery Service Test changed per IEEE 450-1995. Commitment to later version of the standard has been requested in electrical Technical Specifications Change Request. NRC approval is required prior to performing a section of this surveillance test (controlled by the procedure).
96-1044	ODCM Appendix A	Rev of "Relocated Technical Specifications per NRC Generic Letter 89-09 (TAC NO 75060)." - Shows that certain Rotometers are permanently calibrated and do not need calibration surveillance. Also points out that the Offsite Dose Calculation Manual allows the limit for the SIRW tank radio-nuclide concentrations to be exceeded as long as the limiting concentration is restored within 48 hrs, per the action statement. The activity estimate for the SIRW tank rupture is a low percentage of dose to the public. These actions will not allow 10CFR20 dose limits to the public to be exceeded. The consequences of an tank rupture accident will not be increased.
96-1062	GOP 11	Rev of "Refueling Operations and Fuel Handling." - The procedure is being revised to coordinate with the use of contractor procedures to refuel and remove references to Dry Fuel Storage fuel handling which will be covered under FHSO-17. The Reference to Technical Specifications 3.21 for heavy loads is removed assuming a proposed Technical Specifications change is approved. The revised procedure will not be issued until the Technical Specifications change approval is received from the NRC.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-1071	CPAL-RFM-002	Review of Westinghouse Field Service Procedure, "Palisades Refueling." - This is a new procedure that provides guidance and administrative controls to support reactor head outage maintenance and nuclear fuel movements. This procedure meets all licensing basis requirements regarding these activities. The probability of a fuel handling accident will not be increased. Refueling pool and spent fuel pool controls will be in place, and these systems will be maintained by Operations in accordance with Plant and Operations procedures.
96-1077	PNT 10.0	New procedure "General Employee and Radiological Safety Training." -This procedure provides the administrative guidelines for the general employee and radiation training programs. This new procedure is required due the cancellation of the Nuclear Training Program and Procedures. An FSAR change is included to revise the general employee and radiation worker training. An unreviewed safety question is not created by the new procedure or the FSAR changes since they are administrative and meet the requirements of applicable regulations.
96-1107	AP 4.05	Rev of "Operator Training." - Updated procedure to match current organization and responsibilities. Several changes made to refine the operator training program. A Technical Specification Change Request has previously been submitted to change the title of the Plant Operations Superintendent to Shift Operations Supervisor. An unreviewed safety question is not created because a title change has no effect on accidents or malfunctions.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-1111	GOP 12	Rev of "Heat Balance Calculation." - The procedure is being revised to denote the plant is outside its design basis if power is greater than 100.99%. This is because the actual heat balance uncertainty using the Palisades Plant computer is 1.01% while the FSAR and accident analysis assumes 2%. The procedure also requires that AFW is not supplying water to steam generators because the heat balance would be non-conservative. Stable conditions necessary for a heat balance using the Palisades Plant computer were clarified, instructions to perform a heat balance without the Palisades Plant computer were added, and data ensuring screen updates were added. The way the plant will be operated will not be changed. Therefore, the probability of a malfunction or an accident of a different type is not increased.
96-1121	MO-38	Rev of "Auxiliary Feedwater System Monthly Test Procedure." - ASME inservice testing of the auxiliary feedwater pumps is being moved to QO-21 to align with Technical Specifications 4.9.a. This Technical Specifications references ASME Code Section XI. Section XI now requires pump testing on a quarterly rather than monthly basis.
96-1122	RE-134	New procedure "Performance Test Battery Charger No 2 (ED-16)." - Conversion of Special Test Procedure to Technical Specification Surveillance Procedure to be ready to implement proposed electrical Technical Specifications.
96-1123	RE-136	New procedure "Performance Test Battery Charger No 4 (ED-18)." - Conversion of Special Test Procedure to Technical Specification Surveillance Procedure to be ready to implement proposed electrical Technical Specifications.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-1124	RE-133	New procedure "Performance Test Battery Charger No 1 (ED-15)." - Conversion of Special Test Procedure to Technical Specification Surveillance Procedure to be ready to implement proposed electrical Technical Specifications.
96-1125	RE-135	New procedure "Performance Test Battery Charger No 3 (ED-17)." - Conversion of Special Test Procedure to Tech Spec Surveillance Procedure to be ready to implement proposed electrical Tech Specs.
96-1139	RE-132	New procedure "Diesel Generator 1-1 Load Reject." - Conversion of Special Test Procedure to Tech Spec Surveillance Procedure to be ready to implement proposed electrical Tech Specs.
96-1164	RT-8D	Rev of "Engineered Safeguards System - Right Channel" - Procedure was revised to incorporate testing of the Normal Shutdown Sequencer which was previously tested in RT-13B. Plant conditions were revised to allow performance with the reactor cavity flooded. Operation and testing of equipment important to safety will remain within the design of the equipment and system. The only impact this revision has on the FSAR is the number of the procedure that testing is allowed under, and allowing the Diesel Generator to operate when the safety injection signal is reset.
96-1175	QO-21	Rev of "Inservice Test Procedure Auxiliary Feedwater System." - Testing of the auxiliary feedwater pumps is being moved to QO-21 from MO-38 because Technical Specifications and the ASME Code now require this testing quarterly rather than monthly.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-1260	COP 17	Rev of "Radwaste System Chemistry." - Eliminates boron sampling requirements and changes pH limit to allow use of the new Vectra Radwaste Volume Reduction system. Also adds a note stating that the changes only apply TM-96-032 when the RVR-200 Vectra System is being used. The changing of the pH limit will have no effect on the probability or consequences of a malfunction of equipment important to safety as no safety equipment is involved.
96-1327	RE-83B	Rev of "Service/Modified Performance Test - Battery No. ED-02." - Revises the test to allow modified performance testing and recording intercell connection resistances. Proposed Tech Specs allow testing to IEEE Std. 450-1995 which tests battery capacity after the service profile has been verified.
96-1399	FPIP-4	Rev of "Fire Protection Systems and Fire Protection Equipment." - Adds an option for portable fire detection equipment. Points out that only one fire pump battery for each diesel fire pump needs to be operable. And replaces the NRC reporting requirements with the plant corrective action system. There is no impact from portable fire detection equipment as it is seismically restrained to prevent accidents or malfunctions to safety related equipment. The diesel fire pump battery operability has no effect as long as the engine starts (which only requires one battery).
96-1701	HP 2.20	Rev of "Radiation Safety Area Posting." - Adds a provision for posting high radiation areas using flashing lights. Implementation is being held up pending receipt of the Technical Specifications Amendment. The change has been reviewed and approved by the NRC.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-1749	HP 2.5	Rev of "Use of Radiation Controlled Doors." - Adds a provision for posting high radiation areas using flashing lights. Implementation is being held up pending receipt of our Tech Spec Change Request. The change has been reviewed and approved by the NRC.
96-1765	COP 2	Rev of "Chemical and Volume Control System Chemistry." - Changes allow the use of Cation only resin in the delithiating demineralizer. Adds a limit for nitrogen in the VCT. And changes some sampling steps to reflect minor plant changes. Because cation resin has no affinity for boron, the probability of a boron dilution event will be decreased.
96-1779	QO-21	Rev of "Inservice Test Procedure - Auxiliary Feedwater Pumps." - Combines monthly test requirements with quarterly test requirements to enable a full flow test once per quarter. Testing required monthly will remain in MO-38. Also, changes made to testing to reflect Facility Change 966 (AFW P-8B steam supply modification). The changes being made to the test do not increase the probability or consequences of equipment malfunction. The test lineup has been in use, additional data are being taken during previously established test conditions. System operation is in accordance with approved operating procedures.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-1787	SOP 17A	Rev of "Clean Radioactive Waste System." -This adds an attachment, "Processing Concentrate Generated by Operation of Vectra Reverse Osmosis System for Spent Fuel Pool Boron Concentration Reduction." This attachments details the valving for transferring the concentrate to either the recycled boric acid tank, the boric acid batch tank, or to a dirty concentrate tank. The RO suction line will be manned about 12 hours per day by vendor personnel and the rest of the time under heightened operator surveillance. This will preclude the possibility of the siphon effect (resulting from multiple failures in the RO system), and the probability of malfunctions of equipment important to safety will not be increased.
96-1807	SOP 2A	Rev of "Chemical and Volume Control System Charging and Letdown: Concentrated Boric Acid." - Adds steps to open the bypass valve around FT-0202 during diversions. This defeats an interlock on CV-2002, however CV-2002 will be generally closed (the response position). The probability of malfunctions is not increased because CV-2002 is closed during normal plant operation and is also normally closed during plant shutdown. If opened the maximum possible leak is bounded by FSAR 14.23 "Radiological Consequences of Failure of Small Lines Carrying Primary Coolant Outside Containment."

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-1880	RT-8C	Rev of "Engineered Safeguards System - Left Channel." - Procedure was revised to incorporate testing of the Normal Shutdown Sequencer which was previously tested in RT-13A. Plant conditions were revised to allow performance with the reactor cavity flooded. Operation and testing of equipment important to safety will remain within the design of the equipment and system. The only impact this revision has on the FSAR is the number of the procedure that testing is allowed under, and allowing the Diesel Generator to operate when the safety injection signal is reset.
96-1938	MO-38	Rev of "Auxiliary Feedwater System - Monthly Test Procedure." - Quarterly inservice flow testing is being moved to QO-21. This testing was previously performed on a monthly basis to coincide with required monthly pump start checks. Now, pump start checks will be performed by a combination of QO-21 and MO-38. These changes will reduce testing redundancies and reduce frequency of pump testing, while still meeting requirements.
96-1968	FHS-M-32	10CFR72.48 Safety Review - Rev of "Loading and Placing the VSC into Storage." - Adds an Argon purge to remove combustible gases during welding, adds steps for combustible gas monitoring, and changes boron limits to assure that boron concentration is not reduced below minimum. These changes are intended to reduce the effects of the zinc based paint reaction with boric acid and therefore reduce the possibility of an accident or malfunction of a different type than previously evaluated in the SAR.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-1969	FHS-M-34	10CFR72.48 Safety Review - Rev of "Unloading the Multi- Assembly Sealed Basket." - Adds an Argon purge to remove combustible gases, adds steps for combustible gas monitoring, and changes boron limits to assure that boron concentration is not reduced below minimum. These changes are intended to reduce the effects of the zinc based paint reaction with boric acid and therefore reduce the possibility of an accident or malfunction of a different type that previously evaluated in the SAR.
96-2225	T-375	New procedure "Containment Spray Pump Discharge Check Valve CK-ES3220 Non-Intrusive Test." - This check valve failed to demonstrate full disk lift during performance of QO-10 when entering the 1996 Refueling Outage. In order to avoid disassembly and inspection of the valve, this alternate test has been written to accomplish this testing during shutdown cooling operations with the head removed. This test verifies full stroke and closure of the check valve by stopping the operating LPSI pump and running a containment spray pump in its place for a short duration. There will be a moment when all flow to the core is suspended during switchover between the pumps. Use of a spray pump in lieu of a LPSI pump is permitted by GOP 14 and flow to the core may be isolated for up to one hour under conditions specified by Technical Specification 3.1.9.3.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-2495	T-371	Rev of "Nonintrusive Flow Test of CK-CC401 and CK-CC402." - Procedure was revised to close Component Cooling supply to Engineered Safeguards Pumps cooling and measure back flow through the check valves. The HPSI and containment spray pumps will be out of service during testing and the LPSI pumps do not require seal cooling when operating at shutdown cooling temperatures (ie, between 72 and 90 degrees) per the pump vendor. This has been confirmed by testing. Therefore, the probability of a malfunction of equipment important to safety is not increased.
96-2602	QO-15	Rev "Inservice Test Procedure - Component Cooling Water Pumps" - The surveillance procedure was revised to delete pump testing with two pumps in service, and to tighten the allowable band for differential pressure. The revised testing will ensure more consistent results for improved trending capability. Reference values for pump P-52A were also revised following pump rebuild based on results of Special Test T-213 and test result evaluation done by Engineering Analysis EA-BWH-96-001. The test method uses normal system lineups and flow is varied per approved operating procedures. Therefore the possibility of a new accident, or malfunction is not increased.
96-2727	EM-09-10	Rev of "Palisades ILRT/LLRT Program." - Aligns engineering manual with Technical Specification Amendment 174 which permits use of 10CFR50 Appendix J Option B for Integrated Leak Rate Testing.

Procedure Changes for the 1996 Annual Report

Log #	Document ID	Description
96-2758	COP 1	Rev of "Primary Coolant System Chemistry." - Adds reference to NWT report "Impact of Lithium Control Program on Primary System Materials Corrosion & Shutdown Dose Rates at Palisades" and revises upper limits on lithium from 2.35 to 3.5 ppm. This is being done to maintain PCS pH greater than 6.9 with the elevated beginning-of-core 13 boron concentration. This report determined that increasing lithium will not increase the risk of Primary System Water Corrosion Cracking. Therefore, the probability of an accident or malfunction is not increased.
96-2796	FPIP-4	Rev of "Fire Protection Systems and Fire Protection Equipment." - Changes to a performance based system using a graded approach to increase the focus of resources on those elements and features which are determined to have the greatest safety significance. The change does not have an affect on physical plant equipment. The type and frequency of surveillance and/or compensatory measures will be adjusted based on the risk significance or impact on the ability to safely shut the plant in the event of fire.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-0063	SC-96-003	"Replace and Reroute the Feeder Cable to 1D Bus Breaker from Station Power Transformer 1-2 J-box" - A fault on the cable to Bus 1D feeder breaker (152-203) has occurred, and the plan is to reroute the cable because available replacement cable will not fit in the underground duct. The new route will use existing cable trays through the turbine building. Separate Engineering Analyses evaluated: channel separation, compliance with fire protection and safe shutdown during 10CFR50 Appendix R scenarios, cable ampacity, and structural support for the cables and cable trays. Nuclear safety is not affected because the cables are not safety related and loss of offsite power is not an initiating event for any FSAR Safety Analysis events. Presence or absence of offsite power is assumed as a bounding condition for analyzed accidents, and cable rerouting has no effect on these assumptions.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-0520	SC-96-003	"Replace and Reroute the Feeder Cable to 1D Bus Breaker 152-203" - A fault on the cable to Bus 1D feeder breaker (152-203) occurred, and the cable was rerouted because available replacement cable would not fit in the underground duct. The new route used existing cable trays through the turbine building. Separate Engineering Analyses evaluated: channel separation, compliance with fire protection and safe shutdown during 10CFR50 Appendix R scenarios, cable ampacity, and structural support for the cables and cable trays. Engineering Analyses for Specification Change package were changed to "Final" status, and the Safety Evaluation was revised because the original had identified the termination point of the cable as a junction box rather than the Safeguards Bus directly. Nuclear safety was not affected because the cables are not safety related and loss of offsite power is not an initiating event for any FSAR Safety Analysis (Chapter 14) events. Presence or absence of offsite power is assumed as a bounding condition for analyzed accidents, and cable rerouting has no effect on these assumptions.
96-0138	EA-SC-95-055-03	10CFR72.48 Review - "Alternative Compliance Measure for Concrete Truck Uniformity" - This analysis provides an alternative for compliance with concrete truck uniformity requirements contained in ASTM C94 during construction of ventilated concrete casks for the Dry Fuel Storage Project. This has no impact on the SAR or the C of C.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-1939	EA-SC-95-055-04	10CFR72.48 Safety Review - "Evaluation of Design Changes to the Multi-Assembly Sealed Basket (MSB) Shield Lid/Shielding Calculations Using MCBEND for New MSB Vent Design - DFS Project" -This EA evaluates changes to the MSB shield lid to enhance the loading and unloading process. Some of the changes involve the design of the quick disconnect fitting, add a two inch diameter vent (with a pipe plug) that splits into two 1.5 lines in the RX- 277 and into the MSB, and adds a ½" angled passage with a pipe plug for a flexible thermocouple. The EA and the 10CFR72.48 evaluation determined that no unreviewed safety question was created and that there was no significant increase in occupational exposure or environmental impact.
96-0293	SC-96-006	"Installation of Nitrogen Station Bleed Valves for PCV Adjustment" - Bleed valves will be installed downstream of the PCVs in nitrogen stations 1, 1A, 2, 3A, 3B, and 5 to allow for bleed-off of instrument air. Instrument air can pressurize the downstream side of the PCVs through leaking check valves, prohibiting the proper setting and calibration of the regulators. The valves will also allow ready identification of leaking check valves. Lastly, the valves will provide a connection point for Leak Rate Monitor equipment during refueling outages, greatly reducing test time. The valve are installed, pressure tested and fitted with a plug at the vent end. The probability of a malfunction of equipment important to safety will not be increased.
96-0490	SC-96-010	"Main Control Room Events Recorder Removal" - Four Events Recorders in the Control Room are being removed since their function is duplicated by the Plant Process Computer. The Events Recorders have no safety related function, but are seismically mounted. An Unreviewed Safety Question does not exist because the recorders have no safety function, and because component monitoring contacts will be isolated during removal of the recorders.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-0556	EDC-SC-89-291-02	"Radiation Monitoring Recorders RR-2300, 2301, 2302 Replacements" - This Engineering Design Change has the recorders abandoned in place. Most process signals are available through the critical function monitor connection of the plant process computer. The consequences of an accident are not increased, because the information can be taken from the new plant process computer.
96-0589	SC-94-076	"EH Pump Replacement" - This Safety Review was written to support an FSAR change to correct a description of the Electro-Hydraulic Control system in the FSAR. It is tied to the SC only by the fact that the error was discovered during the SC closeout.
96-0663	SC-96-023	"MO-1042A, MO-1043A Pressure Locking Mitigation"- The modification will drill a small hole in the upstream disc of these double disc gate valves. The hole will equalize pressure between the upstream system pressure and the valve's bonnet cavity to prevent pressure locking. Nuclear safety is not affected because there is no impact on the valves' function or structural integrity.
96-0672	SC-96-020	"CVCS System Boration/Dilution Control System Upgrade" - Replaces the existing Chemical and Volume Control system boric acid make up boration/dilution flow control loops 0210A and 0210B with microprocessor based instrumentation. This replaces obsolete equipment that has been a source of problems. The probability of Boron Dilution Accident is not increased because of proved reliability of the replacement instrumentation.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-1369	SC-96-020	"CVCS System Boration/Dilution Control System Upgrade" - Replaces the existing Chemical and Volume Control system boric acid make up boration/dilution flow control loops 0210A and 0210B with microprocessor based instrumentation. This replaces obsolete equipment that has been a major source of problems. Revision 1 to the SE reflects a status change from non-Q to Q for seismic 2 over 1 mounting considerations.
96-0722	EA-SC-93-083-26	10CFR72.48 Safety Review - "MSB Temperature Stresses During Unloading" - This analysis evaluates the thermal stresses in the multi-assembly sealed basket that occur during the unloading process. The analysis concluded that the thermal stresses are bounded by temperature distributions evaluated in the SAR and that the fatigue cycles added by the rapid cool down of the MSB when filled with water are low enough to not require further evaluation per ASME Section III, Subsection NC-3219.2.
96-0743	SC-96-005	"Addition of Handwheel Operators to Valves CV-2008 and CV-2010" - This modification adds manual operators to allow opening of the valves during a loss of power or instrument air scenario. Opening of the valves allows for the gravity draining of T-81 to T-2 at a higher rate then current bypass lines. Improving the ability to supply water to the condensate storage tank will not increase the consequences of an analyzed accident.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-0745	SC-96-007	"Installation of the Refueling Machine In-Mast Sipping System" - This adds a Westinghouse in-mast sipping system to the refueling machine. The system will rely on changes in hydraulic pressure when raising fuel bundles to cause fission gasses to migrate from leaking fuel assemblies. Air injected at the bottom of the mast will carry the gasses up to a monitor at the top of the mast. In-mast sipping is a highly accurate test method that has little scheduler impact on an outage. Fuel subcriticality is maintained during sipping operations and an analysis concluded that there is no threat of boiling the water within the mast during sipping.
96-0820	SC-96-018	"Install Valves in CWRT Vent Line VGCH and V-14 Suction Duct and add Running Drain to CWRT Vent"- This modification restores the Clean Waste Receiver Tank vent connection to the Vent Gas Collection Header and permanently installs a parallel path to the VGCH via Radwaste Area Exhaust Fan V-14, which is currently installed under TM-95-084. Also, a drain on the CWRT vent line is being replaced by a running drain using a loop seal to discharge water that collects in the line. The possibility of an accident of a different type will not be created because the drain line loop seal (the only potential new release path) vents to the auxiliary building and is covered in the existing accident evaluations in the FSAR.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-0821	SC-96-024	"Addition of Alternate 480V Power Feed For EDG1-1 Room Vent Fans and Modification of 2400 V Bifurcated Feed for EX-13" - An alternate power source for fans V-24A and V-24B will be provided from MCC-5. This power source is necessary to cool the 1-1 Diesel Generator Room for safe shutdown following a fire in either the Electrical Equipment Room or the Cable Spreading Room. Additionally, the power sources for Station Power Transformer 13 and Switchyard Auxiliary Power Transformer 51 will be swapped between breakers 152-108 and 152-110 on Bus 1C. This power source swap is necessary to be able to achieve hot shutdown following a fire in the 590' level of the Auxiliary Building. A fire in the baler room can cause a loss of all 480 VAC Load Centers. Swapping breakers will prevent a fault in Load Center 77 from de-energizing Load Center 13 because of a common feeder breaker. This modification improves the capability to safely shut down the plant in the event of a fire.
96-0829	SC-94-090	"Install Two Tees and Three Valves in the Spent Fuel Pool Cooling System and Modify Support HC4-H89" - This modification will allow for easy connection of an alternate spent fuel pool cooling system in the future. Also, support HC4-H89 is changed to a rigid support to bring the piping system into compliance with FSAR design requirements. The installation of the tees and valves will require that spent fuel pool cooling be suspended. An analysis determined that the heat-up rate of the pool is such that the work can be completed before the fuel pool reaches its administrative limit of 125°F. However, the installation procedure contains pool temperature monitoring requirements and contingency plans to restore cooling if fuel pool temperature approaches its administrative limit.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-0850	SC-96-027	"Addition of Continuous Air Monitors to the Control Room HVAC System" - Installs CAMs in the control room to alert the operators of high airborne activity. This complies with General Design Criterion 19. The probability of malfunctions of equipment important to safety will not be increased because the new CAMs will not have any impact on components or systems important to safety. The new CAMs are passive components used only to monitor airborne activity in the control room HVAC, and alert the operators to activate the emergency air filtration system.
96-0859	SC-96-013	"Addition of Tees/Valves to the Charging Pump Suction Lines" - This installs two tees and two valves in the charging pump suction lines to allow easy connection of a booster pump. Also, support HC16-H9 is being modified to bring the piping system into compliance with FSAR design requirements. The probability of malfunction will not increase as the design meets the original requirements for components within the CVC system. The consequences of a malfunction are not increased as the manual valves will be placed in the proper line up for normal operation, only to be used when a booster pump is needed.
96-1802	EDC-SC-96-013-01	"Revise Page 3 of 4 of the "10CFR50.59 USQE" to Reflect the Correct Class of the Affected Piping as Shown on the Color Coded P&ID" - The safety evaluation was revised to correct an inaccurate description of the ASME Class designation of the piping. Also, a Code requirements checklist was revised to reflect the NDE and ISI requirements of M-1600 which is a new specification.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-1046	SC-95-072	"Replace Temporary Venting and Priming Line (TM-94-047) with a Permanent Line" - This installs a permanent priming and venting line on the discharge line of the warm water recirculation pump P-5 to facilitate startup of the pump. This line contains a Val-Matic Air and Vacuum valve which facilitates priming and venting of the discharge line. Inadequate venting and priming of the pump causes increased head loss in the discharge line. This causes the pump motor breaker to trip on high current. The consequences of a malfunction of equipment important to safety is not increased. This line will actually improve the performance of the pump by increasing the pump flow rate, and decreasing the load on the motor.
96-1064	SC-96-032	"Allow Operation of T-104A/B/C in Series" - Adds 3 inch piping and four valves to T-104A,B,C piping to allow use of the steam generator blow down demineralizer tanks in series. Operation of the demineralizer in series will offer significant improvements in chemistry control, and reductions in the use of bulk chemicals and the generation of radwaste. The demineralizer tanks and associated components are non-safety and are located in the turbine building. No equipment important to safety is located in this area. Thus, the probability of a malfunction of equipment important to safety is not increased.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-1127	SC-96-026	"Control Room Layout Modifications" - This SC will rearrange the office areas of the control room. Shift Supervisor and kitchen area walls will be moved, Control Room Operator's desks will be replaced with a console, new carpeting will be installed, lighting fixtures and outlets will be relocated, emergency lighting units will be relocated, and panel C-259 will be removed with its associated components relocated. The installation activities will not disrupt the control room. All affected components will meet requirements during installation activities as well as in its modified configuration.
96-1259	SC-96-002	"Installation of Palisades Plant Computer Failover Work Station" - Adds a work station to take over for the host computer if it fails. Some existing work stations will be relocated and a multi-port repeater added. The plant process computer is not required for safe shutdown or accident mitigation, and has no affect on safety related equipment since it is basically a monitoring piece of equipment.
96-1296	SC-96-048	"Replace Charging Pump Seal Lubrication Pump P-55BB and Add Vent Line" - This Specification Change justifies the use of a slightly larger Seal Lubrication Pump and installs a vent line to allow for improved pump priming operations. Pump replacement with a larger model is recommended by the vender given the current design pump in no longer made. Replacing the seal lubrication pump will have no effect on the charging pump. The new vent line is to assist with filling and venting the seal water system prior to pump start. The vent line isolation is normally closed with the additional isolation provided by a cap. Thus, the probability of malfunctions of equipment important to safety will not be increased.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-1381	SC-96-047	"Permanent Replacement of the Chemical Addition Pump P-57" - This Specification Change replaces the current metering pump installed under a Temporary Modification with a permanent design. The new pump is an air driven pump. The possibility of a malfunction of a different type is not created. The air that could be injected into the charging pump suction is bounded by the previously analyzed failure of the charging pump accumulator bladder which would introduce a considerably larger volume of gas into the pump and possibly the PCS. An operator will be at the pump at all times during operation to stop the pump immediately on indication of diaphragm failure.
96-1428	EDC-SC-94-090-02	"Install Two Tees and Three Valves in the Spent Fuel Pool Cooling System and Modify Support HC4-H89." - This analysis was revised to include the expected spent fuel pool heat up rate based on heat up test data recently taken. The expected heat up rate to be used during installation activities is conservative with respect to the spent fuel pool heat up test data and will bound any variations in spent fuel pool level, humidity, and air temperature.
96-1524	SC-96-056	"Turbine Building Fire Protection Sprinkler Addition" - Installs a fire protection sprinkler system in the northeast corner of the turbine building just outside the jailhouse door. This system will provide a fire protection barrier between the turbine building and the Component Cooling Water room and satisfies an NRC commitment. Note: This installation was previously approved as a commercial control modification, and was subsequently upgraded to this specification change. The possibility of an accident or a malfunction of a different type is not created. No safety related equipment is affected by the fire protection system addition.

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-1839	SC-96-055	"Install Backup Air Bottles for CV-3018" - Air bottles are being installed to provide a means of local operation of CV-3018 in the event of loss of High Pressure Air or control power. Stored air and local operation of this valve provide an alternate flow path for High Pressure Safety Injection to cope with certain 10CFR50 Appendix R scenarios. The backup air supply to is normally isolated by two valves. The components are seismically mounted. Thus, the possibility of an accident or malfunction of a different type is not increased.
96-2387	SC-95-079	"Removal of Backup Stack Gas Radiation Monitors RIA-2318 and RIA-2319 and Associated Equipment From Panel EC-11-3" - This SC removes RIA-2318, RIA-2319 and associated equipment from control room panel EC-11. In addition, RE-1815 and associated equipment will be de-energized and abandoned in place. This equipment was previously retired in place and is no longer used as a backup to the Remote Gas Effluent Monitoring system. Grab samples are used to back up RGEM. The removal of an unused system has no impact on plant operations. The probability of a malfunction of safety related equipment is not increased.
96-2478	EDC-SC-96-051-09	"Revise Safety Evaluation" - Safety Evaluation for replacement of Diesel Fuel Oil Transfer Pumps P-18A/B will be revised to recognize that the pumps are not required to be operable when the Primary Coolant temperature is less than 300 degrees. One pump will be required to be available while working on the second pump. (Rev 0 of Safety Evaluation reviewed under Log # 96-1951)

Specification Changes (SC) for the 1996 Annual Report

Log #	Document ID	Description
96-2716	EDC-SC-96-051-16	"Replace Pump P-18A with a New Pump" - This EDC changes the normal position of the suction isolation valve for P-18B (MV-FO103) from locked open to normally closed. This will reduce air leakage from the non-operating train, maximizing available vacuum to assure priming. Manual actions required to change valve positions to put P-18B in service will not reduce the margin of safety since manual action is currently required at the local hand switches to put it into service. P-18A remains the normal automatic fuel transfer pump.
96-2516	SC-96-067	"Replacement Containment Air Cooler Filter Media" - This SC changes the original air cooler design that used replaceable fiberglass filter pads with filters of stainless steel mesh. The fiberglass filters would break down under LOCA/MSLB containment conditions and adversely affect the containment air coolers. The new filters meet the differential pressure requirements of the existing filters and will be cleaned and re-oiled each refueling outage to maintain their dust removal function. This modification removes an unwanted failure of filter media during a LOCA/MSLB. Thus the consequences of a previously reviewed accident are reduced.
96-2544	SC-96-069	"Addition of Two Surge Pots (Standpipes) to the Clean Radioactive Waste System Inside Containment" - Surge pots are being added to piping inside containment to alleviate potential LOCA/MSLB-induced over pressurization. The surge pots are being added to the lines going into the Clean Waste Receiver Tanks from the discharge of the degasifier pumps (P-68A/B) and the receiver tank recirculating pump (P-70). The new components are entirely passive, and designed and built to the same requirements as the existing system. No new flow paths or failure positions are created.

Temporary Modifications (TM) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0129	TM-96-005	"Installation of Reactor Cavity Leak Collection Tank and System" - This Temporary Modification installs a reactor cavity leakage collection system to return liner leakage back to the refueling pool. The collection system will be installed at a point in the liner leak monitoring system where all liner leakage can be collected before it reaches the Containment Sump. Excess flow will result in overflow from the collection system to the Containment Sump. The hose that returns leakage back to the refueling pool will be secured at least 1 foot above the reactor cavity skimmers, precluding any possibility of a siphon effect that could drain the pool.
96-0176	TM-96-009	Temporary Modification TM-96-009 removed the suction piping from P-119, Evaporator Concentrate Metering Pump, and replaced the piping with red hose. The TM was used to allow processing after the installed piping clogged during operation. There will be no increase in the probability or consequences of malfunctions of equipment important to safety since this system is not safety related. The bypassing restores system function.
96-0454	TM-96-009	"Installation of Temporary Red Rubber Hose Bypass of Evaporator Concentrates Metering Pump P-119 Suction" - Revision to TM scope provides for the control of opened links to the heat tracing circuits opened as part of the original work order.
96-0183	TM-96-007	"Temporary Installation of Replacement Chemical Addition Pump P-57" The existing motor driven pump will be replaced with an air operated pump until a replacement pump can be installed. Dilution of the Primary Coolant System is the only credible incident which could be affected by the use of this pump. It's probability is controlled by procedure not the design of the pump. No new accidents are created.

Temporary Modifications (TM) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-2634	TM-96-007	"Temporary Installation Of Replacement Chemical Addition Pump P-57" - This revision to the temporary modification incorporates actions associated with a potential but unlikely failure of the pump's diaphragm which would result in air being injected into an operating charging pump. Changes address procedure steps to monitor the pump during operation and ensure it is isolated from the system when not in use. A revised Safety Review and Analysis was also included in the revised package and concluded that binding of the charging pumps was a current failure mode assumed in the design when considering the installation of suction accumulators and the potential for failure that they represent.
96-0212	TM-96-014	"Remove Dirty Waste Tank T-60 Relief Valve RV-1117" - This temporary modification allowed for removal of RV-1117 from T-60, Dirty Waste Drain Tank for inspection and cleaning in an effort to reduce/eliminate air in leakage into the waste gas system. Over pressure protection was provided by leaving the relief valve flange open to atmosphere. Since the Dirty Waste Drain Tank remained in service, special operating, maintenance and safety recommendations were provided. There will be no increase in the probability of malfunctions of equipment important to safety since this system is not safety related. Over pressure protection is still provided, but the discharge path goes to the dirty waste room. The consequences are not increased, as this release is bounded by the event of FSAR 14.21.1.3.2 (Waste Gas Incident).

Temporary Modifications (TM) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0252	TM-96-006	"Install Safety Gratings Around Service Water Pump Intake Bells for Diver Protection" - This Temporary Modification allows the installation of a physical barrier between an operating service Water Pump intake bell and a diver involved in removal of sand and zebra mussels from the Service Water Intake Bay. The screens are designed so that water flow is not restricted. Thus, probability or consequences of an accident are not affected.
96-0390	TM-96-011	"Temporary Construction Power via EX-15A" - Use pressurizer heater breaker and installed spare transformer to provide temporary 480 VAC outage power inside containment and in the turbine building. This is repeat of Temporary Modifications used in 1993 and 1995 The Temporary Modification will be installed and removed while the plant is in Cold Shutdown or Refueling mode, when pressurizer heaters are not used. Because the Temporary Modification is limited to Cold Shutdown, nuclear safety is not affected.
96-0522	TM-96-010	"Temporary Construction Power on the North Side of Turbine Building" - The Temporary Modification (TM) uses a spare breaker on Load Center 17 to feed a disconnect switch for construction power. The additional load on bus 1A places a restriction on running all three pumps (two primary coolant pumps and one condensate pump) which are supplied from bus 1A while the Temporary Modification is installed. This is not an unreviewed safety question since the Temporary Modification will be removed prior to all three pumps being needed to support plant operation.

Temporary Modifications (TM) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0555	TM-96-013	"Temporary Construction Power in Turbine Building During Outage" - The breaker for Heater Drain Pump P-10A will be used to provide construction power during the 1996 refueling outage. Nuclear safety is not affected because the installation of the Temporary Modification is limited to Cold Shutdown and Heater Drain Pumps are not required below 90% power.
96-0592	TM-96-019	"Temporary Power to 52-206 From 52-1109 During Bus #2 Outage" - This Temporary Modification (TM) will be installed while Motor Control Center MCC-2 is de-energized for maintenance and testing during the 1996 refueling outage. The TM is necessary in order to maintain security equipment energized during the MCC outage. Nuclear Safety is not affected because the TM will be installed and removed while the plant is in Cold Shutdown and in a condition requiring that only one train of Shutdown Cooling to be operable. Electrical protection will be set to ensure protection of connected components and to ensure coordination with upstream power sources. The TM is isolated from MCC-2 and affects only one load breaker.
96-0724	TM-96-031	"Install Ultrasonic Flow Measurement (UFM) System to Measure Feedwater Flow to Each Steam Generator" - Installs a UFM device on the outside of the feedwater piping to allow accurate measurement of feedwater flow. This is intended to verify the accuracy of the feedwater venturi flow instruments. The weight and materials of the equipment to be installed have no impact on accidents or containment analyses.

Temporary Modifications (TM) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-0951	TM-96-033	"Tee at MV-FPS521 for Fire Protection to Westinghouse Temporary Tool and Office Trailers" - This Temporary Modification allows for the connection of the trailers' internal sprinkler system to the plant's fire water system. In the event of a hose rupture, fire pump capacities will not be exceeded. The ability to respond to fire will not be impaired. Thus the consequences of any malfunctions are not increased.
96-1003	TM-96-032	"Modification of Plant Interface Connections to Supply Hook-up Locations Needed to Install Temporary VRS Unit" - This provides connections to the Volume Reduction System, the makeup demineralized water system, and the service air system to support the temporary VRS being provided by VECTRA. The temporary VRS will be located in the drum storage area in the Radwaste Addition to the Auxiliary Building and will meet all regulatory requirements that exist for permanently installed volume reduction systems.
96-1032	TM-96-036	"Install Freeze Seal for Inspection and Minor Repairs of CK-ES3148 and MO-3014" - This TM installs a freeze seal upstream of FE-0314 and installs a blank flange in place of FE-0314. This is being done because CK-ES3148 and MO-3014 leak by. This modification will affect one of the Low Pressure Safety Injection/Shutdown Cooling flow indicators. Only two of the four are required to be operable. All other equipment required for shut down cooling is not affected. The probability of malfunction of equipment important to safety is not increased

Temporary Modifications (TM) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1053	TM-96-038	"Removal of Spool Piece Between MV-SFP123 and MV-ES3263" - This TM controls the removal of a spool piece in the Spent Fuel Pool Cooling piping and controls the connection of the "Tri-Nuke Filter" to the flange on the side of MV-SFP123. TM will support decontamination activities in the Spent Fuel Pool Tilt Pit. The two spent fuel pool valves are not relied upon for any accident. MV-ES3263 will remain operable in its normally closed position for the duration of the TM. The skid will not pose a hazard either seismically, or from a fire protection stand point.
96-1138	TM-96-040	"Install Mechanical Block of CV-1212 to Maintain the Valve in the Open Position" - The mechanical block will prevent inadvertent closure resulting in isolation of service air to containment. The service air system provides breathing air to personnel inside containment. This temporary change will only affect the ability of CV-1212 to close. Closure is not required to mitigate the consequences of any accident. Containment closure (via MV-CA122 and MV-CA728) is controlled by procedures GOP-11 and GOP-14.
96-1208	TM-96-034	"Install Mechanical Block on CV-3029 to Maintain the Valve in the Closed Position" - Containment sump isolation valve will be blocked closed to provide containment closure during maintenance activities on VOP-3029 during the 1996 refueling outage. The TM affects only the function of CV-3029. Closure of this valve does not affect any other equipment that is required during cold shutdown. CV-3029, itself, is not required to open for any accidents that are credible during cold shutdown.

Temporary Modifications (TM) for the 1996 Palisades Annual Report

Log #	Document ID	Description
96-1243	TM-96-035	"Install Mechanical Block on CV-3030 to Maintain the Valve in the Closed Position" - Containment sump isolation valve will be blocked closed to provide containment closure during maintenance activities on VOP-3030 during the 1996 refueling outage. The TM affects only the function of CV-3030. Closure of this valve does not affect any other equipment that is required during cold shutdown. CV-3030, itself, is not required to open for any accidents that are credible during cold shutdown.
96-1351	TM-96-043	"Install Freeze Seal to Isolate Service Water to MV-SW256 for Valve Replacement" - The freeze seal is needed to isolate a 3 inch service water line to C-2A air compressor in order to replace MV-SW256. The freeze seal will be located in the component cooling water room. A freeze seal failure contingency plan has been developed in accordance with Special Process Procedure FS-1. The plan requires maintaining the freeze seal less than -10° F and notifying the shift supervisor if -10°F is exceeded, and installing a temporary plug or isolating the service water header if the seal fails. Loss of one redundant service water line has been evaluated in the FSAR. Thus the probability of malfunctions of equipment important to safety is not increased.

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Log #	Document ID	Description
96-1762	TM-96-046	"Installation of Vendor Supplied Reverse Osmosis Unit for Spent Fuel Pool Boron Reduction" - This RO unit will reduce the concentration of the spent fuel pool from about 2900 ppm to less that 2450 ppm in support of refueling. This unit will pump the concentrates to the Recycled Boric Acid Storage Tank T-96. The permeate will be routed back to the spent fuel pool. This permeate will be of low boron concentration. A boron dilution incident will not occur because the permeate flow rate is only about 2.5 gpm, the permeate is discharged to the pool near the turbulent SFP cooling pump discharge to promote mixing, and the permeate and fuel pool will be sampled for boron concentration by Chemistry. The unit will be placed to the north of the spent fuel pool and will be moved in accordance with heavy loads procedures.
96-1905	TM-96-047	"Installation Supply Header Downstream of MV-DMW753." This Temporary Modification installs a distribution header inside containment on the demineralized water header to the Quench Tank to support refueling outage activities. This affects only demineralized water and the existing isolation valve MV-DMW753 may be used to isolate the failure. CV-0155 which is a containment integrity valve will still meet the requirements of Technical Specification 3.6. No consequences of accidents or malfunctions are increased.
96-2083	TM-96-049	"Installation of Feedwater Purity Air Compressor Discharge Cross-Tie to Turbine Deck." - This cross-tie will provide an air supply to the turbine deck for Westinghouse. The hose, valves, and fittings meet the design requirements of the connected air system. The hose is installed with an OSHA rated valve that will isolate air should the hose fail. There are no accidents that require extra air compressors. The cross-tie will augment the supply of compressed air, which is not a safety related system. No consequences of malfunctions of equipment important to safety are increased.

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Log #	Document ID	Description
96-2150	TM-96-053	"Temporary Relocation of Cables Tagged IN05&07/C06-1C-MC001S1/4 and IN06&08/C06-1D-MC001S1/5" - TM changes the source of the neutron count signals that are fed to the Data Acquisition System (DAS). Currently the signals come from connector J13 of the nuclear drawers NI-1/3 and NI-2/4. It will be moved to connector J12 of these drawers. Connector J13 also currently supplies the neutron count signal to the "popper". The fidelity of the signal supplied by connector J13 to both the DAS system and the "popper" is low. Moving the source of the DAS input to connector J12 will increase the fidelity of that signal. The J12 output jack is protected by a 1/16 amp fuse. No malfunctions of equipment important to safety are increased.
96-2217	TM-96-057	"Installation of RBAT to Clean Waste Receiver Tank Cross-Tie" - Installs a cross-tie to transfer concentrated boric acid from the recycled boric acid tank (T-77) to the clean waste receiver tanks. The existing hard pipe flow path is plugged. The routing of the red rubber hose will require two fire doors to be blocked open; compensatory fire tours will be established. One of the tie-ins is between two containment isolation valves. However, the containment closure requirements during refueling activities specified in GOP 11 will still be met. Finally, the boric acid in T-77 will not crystallize at auxiliary building temperatures. There are no pertinent accidents requiring these systems during cold shutdown. The loops connected by this hose can be easily isolated using existing system valves. Therefore, the probability of malfunctions of equipment important to safety is not increased.
96-2251	TM-96-058	"Temporary Pressure Gauge for FT-1051/FIC-1051" - FT-1051 is not operable. To monitor the batch release of radwaste a dP gauge will be installed at the transmitter. The Offsite Dose Calculation Manual requires that flows be estimated every four hours during a release if FT-1051 is inoperable.

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Log #	Document ID	Description
96-2272	TM-96-060	"Install Filter on Reactor Side Tilt Pit Drain Line At MV-SFP505" - This Temporary Modification connects the Tri-Nuke filter to the reactor side tilt pit drain valve, MV-SFP505. Draining through the filter will only occur during times when refueling is not in progress. The filter does not interface with any equipment important to safety. MV-SFP505 is locked closed during refueling operations so the filter does not enter into the boundary of the reactor cavity. The possibility of a malfunction of a different type is not created.
96-2275	TM-96-059	"Jumper DC Control Power in EA-12 to Allow Breaker Setting Changes for 72-402 and 72-403" - A jumper will be installed between terminal strips in cubicles of Bus 1D to maintain DC control power to all breakers while DC control power feeder breakers are removed for setting changes. The probability or consequences of a malfunction of equipment important to safety is not increased. The modification mitigates a possible malfunction by maintaining control power to all breakers on 1D bus.
96-2295	TM-96-036	"Install Freeze Seal for Inspection and Minor Repairs of CK-ES-3148 and MO-3014" - The TM and safety evaluation are being revised to require primary coolant system level be maintained when the valve/piping is open per the requirements of a plant review committee meeting held 10/31/96.

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Log #	Document ID	Description
96-2304	TM-96-061	"Installation of Seal Leak Drain Line for "A" S/G Hot Leg Dam." - This installs a red rubber hose for the purpose of transferring wet nozzle dam leakage to the reactor cavity leak collection tank. This TM also serves to relieve to some degree the static pressure of water should the space between the nozzle dams become water filled. The pressure and temperature ratings of the hose and fittings far exceed that applied by the water level of the reactor cavity. Should nozzle dam leakage overflow the leakage monitoring tank, the level alarm will come in and stay in. Operations can bypass this alarm to prevent masking others. The possibility of a malfunction of equipment important to safety is not increased.
96-2313	TM-96-062	"Install Mechanical Block to Hold Open PO-1816 while Instrument Air is Removed" - Discharge damper for main exhaust fan V-6A will be blocked open to allow fan operation. This damper does not shut to prevent releases. This damper is relied upon to prevent back flow when V-6B is running. The V-6B damper is failed shut, so no other malfunction of equipment can occur.
96-2354	TM-96-067	"Mechanical Jumper to Fill Volume Control Tank from Safety Injection and Refueling Water Tank" - A hose will be installed between a vent and a drain valve to gravity feed from SIRWT to VCT to allow calibration of level instruments. The VCT is inoperable, and the refueling cavity has already been filled from the SIRWT. There will be no increase in the probability or consequences of malfunctions of equipment important to safety. Both connection points remain easily isolatable during the installation and operation of this TM.

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Log #	Document ID	Description
96-2435	TM-96-070	"Install Mechanical Gag on PO-1893A and PO-1893B" - Installs mechanical gagging devices on the positioners for the fuel handling area dampers to maintain the dampers in the "refueling" position while maintenance is performed on a positioner solenoid valve. The "refueling" position is the position required of these dampers in the event of a fuel handling accident.
96-2445	TM-96-063	"Provide Alternate Feeds for DC Circuits" - Jumpers will be installed to maintain critical loads from DC Bus D-11-1 to remain energized while the bus is de-energized for breaker replacement. The probability or consequences of a malfunction of equipment important to safety is not increased. The modification mitigates a possible malfunction by maintaining control power to critical loads.
96-2446	TM-96-064	"Provide Alternate Feeds for DC Circuits" - Jumpers will be installed to maintain critical loads from DC Bus D-11-2 to remain energized while the bus is de-energized for breaker replacement. The probability or consequences of a malfunction of equipment important to safety is not increased. The modification mitigates a possible malfunction by maintaining control power to critical loads.
96-2465	TM-96-066	"Provide Alternate Feeds for DC Circuits" - Jumpers will be installed to maintain critical loads from DC Bus D-21-2 to remain energized while the bus is de-energized for breaker replacement. The probability or consequences of a malfunction of equipment important to safety is not increased. The modification mitigates a possible malfunction by maintaining control power to critical loads.

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Log #	Document ID	Description
96-2470	TM-96-065	"Provide Alternate Feeds for DC Circuits" - Jumpers will be installed to maintain critical loads from DC Bus D-21-1 to remain energized while the bus is de-energized for breaker replacement. The probability or consequences of a malfunction of equipment important to safety is not increased. The modification mitigates a possible malfunction by maintaining control power to critical loads.
96-2573	TM-96-072	"Provide Alternate Feeds for DC Circuits" - Jumpers will be installed to maintain critical loads from DC Bus D-11-1 energized while the bus is de-energized for breaker replacement. The probability or consequences of a malfunction of equipment important to safety is not increased. The modification mitigates a possible malfunction by maintaining control power to critical loads.
96-2723	TM-96-073	"Block Closed CV-3212 And CV-3213" - TM is designed to block the valves closed for workman's protective tagging. TM will be removed prior to heat up. This isolates air and nitrogen to the valve during cold shutdown. One train of shutdown cooling is sufficient per Technical Specification 3.3 basis.