

December 23, 2002

Mr. Douglas E. Cooper
Site Vice President
Palisades Nuclear Plant
Nuclear Management Company, LLC
27780 Blue Star Memorial Highway
Covert, MI 49043-9530

SUBJECT: PALISADES NUCLEAR PLANT
NRC INSPECTION REPORT 50-255/02-11(DRS)

Dear Mr. Cooper:

On December 6, 2002, the NRC completed an inspection at your Palisades Nuclear Plant. The enclosed report documents the inspection findings which were discussed on December 6, 2002, with yourself and/or other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, the inspection focused on permanent plant modifications and changes, tests, and experiments done in accordance with 10 CFR 50.59.

Based on the results of this inspection, no findings of significance were identified

In accordance with 10 CFR Part 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,
/RA by R. Caniano Acting For/

David E. Hills, Chief
Mechanical Engineering Branch
Division of Reactor Safety

Docket No. 50-255
License No. DPR-20

Enclosure: Inspection Report 50-255/02-11(DRS)

See Attached Distribution

D. Cooper

-2-

cc w/encl: R. Fenech, Senior Vice President, Nuclear
Fossil and Hydro Operations
L. Lahti, Manager, Licensing
R. Anderson, Executive Vice President and Chief Nuclear Officer, NMC
A. Udrys, Esquire, Consumers Energy Company
S. Wawro, Nuclear Asset Director, Consumers Energy Company
W. Rendell, Supervisor, Covert Township
Office of the Governor
Michigan Department of Environmental Quality
Department of Attorney General (MI)

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David E. Hills, Chief
 Mechanical Engineering Branch
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See Attached Distribution

DOCUMENT NAME: G:DRS\ML030020837.wpd

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D. Cooper

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cc w/encl: R. Fenech, Senior Vice President, Nuclear
Fossil and Hydro Operations
L. Lahti, Manager, Licensing
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S. Wawro, Nuclear Asset Director, Consumers Energy Company
W. Rendell, Supervisor, Covert Township
Office of the Governor
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-255
License No: DPR-20

Report No: 50-255/02-11(DRS)

Licensee: Nuclear Management Company, LLC

Facility: Palisades Nuclear Plant

Location: 27780 Blue Star Memorial Highway
Covert, MI 49043-9530

Dates: December 2 through 6, 2002

Inspectors: A. Dunlop, Reactor Inspector
G. Hausman, Reactor Inspector
Z. Falevits, Reactor Inspector

Approved by: David E. Hills, Chief
Mechanical Engineering Branch
Division of Reactor Safety (DRS)

SUMMARY OF FINDINGS

IR 05000255-02-11(DRS), Nuclear Management Company LLC on 12/02-12/06/02, Palisades Nuclear Plant. Permanent plant modification and changes, tests, and experiments.

The report covers a baseline inspection by three regional inspectors. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000, and can be found on the NRC website at: <http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html>

A. Inspector Identified Findings

Cornerstone: Initiating Events, Mitigating Systems, Barrier Integrity

No findings of significance were identified.

B. Licensee Identified Findings

No findings of significance were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R02 Evaluations of Changes, Tests, or Experiments (71111.02)

Review of Evaluations and Screenings for Changes, Tests, or Experiments

a. Inspection Scope

The inspectors reviewed 11 evaluations and 19 screenings required by 10 CFR 50.59. These documents were reviewed to ensure consistency with the requirements of 10 CFR 50.59. The inspectors used Nuclear Energy Institute (NEI) 96-07, Guidelines of 50.59 Evaluations, Revision 1, to determine acceptability of the completed evaluations, and screenings. The NEI document was endorsed by the NRC in Regulatory Guide 1.187, Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments, November 2000. The inspectors also consulted Inspection Manual, Part 9900, 10 CFR GUIDANCE: 50.59. Documents reviewed during the inspection are listed at the end of the report.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17B)

Review of Recent Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed 15 permanent plant modifications that were performed by the licensee's engineering staff during the last 2 years, two of which were commercial grade dedications and one of which was a setpoint change. The modifications were reviewed to verify that the completed design changes were in accordance with specified design requirements and the licensing bases and to confirm that the changes did not affect the modified system or other systems' safety function. Calculations which were performed or revised to support the modifications were also reviewed. As applicable to the status of the modification, post-modification testing was reviewed to verify that the system, and associated support systems, functioned properly and that the modification accomplished its intended function. The inspectors also verified that the completed modifications did not place the plant in an increased risk configuration. The inspectors evaluated the modifications against the licensee's design basis documents and the Updated Safety Analysis Report (USAR). The inspectors also used applicable industry standards, such as the Institute of Electrical and Electronics Engineers (IEEE), to evaluate acceptability of the modifications.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed a sample of permanent plant modifications and 10 CFR 50.59 program problems that were identified by the licensee and entered into the corrective action program. The inspectors reviewed these issues to verify an appropriate threshold for identifying issues and to evaluate the effectiveness of corrective actions related to design issues. In addition, condition reports initiated on issues identified during the inspection were reviewed to verify adequate problem identification and incorporation of the problem into the corrective action system. The specific corrective action documents that were sampled and reviewed by the inspectors are listed in the attachment to this report.

b. Findings

No findings of significance were identified.

4OA6 Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. D. Cooper and other members of licensee management at the conclusion of the inspection on December 6, 2002. The licensee acknowledged the information presented during both meetings. No proprietary information was identified.

KEY POINTS OF CONTACT

Licensee

D. Cooper, NMC/Site Vice President
B. Gambrell, NMC/Design Engineering Manager
G. Goralski, NMC/Safety & Design Review Supervisor
D. Malone, NMC/Regulatory Compliance Supervisor
R. Remus, INPO/Assistant Plant General Manager
S. Wawro, Consumers Energy/Asset Manager

NRC

J. Lennartz, Senior Resident Inspector
C. Osterholtz, Senior Resident Inspector, San Onofre

LIST OF DOCUMENTS REVIEWED

1R02 Evaluations of Changes, Tests, or Experiments

10 CFR 50.59 Evaluations and Screenings

SDR 00-1120; Installed Instrument Control and Standardization, dated September 7, 2000

SDR 00-1161; Low Pressure SIS Initiation Logic; dated September 25, 2000

SDR 00-1187; Diesel Generator BF and BFD Relays Test; dated September 18, 2000

SDR 00-1244; QO-16, "Inservice Test Procedure - Containment Spray Pumps," Revision 17C; dated October 25, 2000

SDR 00-1352; Reactor Protective System Instrumentation - Changes ITS Basis for SR 3.3.1.4; dated October 24, 2000

SDR 00-1499; Configuration Changes Associated with T-89A Level Instrument Removal; dated April 2, 2001

SDR 01-0006; 10 CFR 50.59 and 72.48 Reviews; dated February 28, 2001

SDR 01-0101; Installation of Raychem Heat Shrinkable Insulation; dated November 18, 2001

SDR 01-0130; RO-32 Basis, "Containment Building Penetrations - Local Leak Rate Test," Revision 6; dated March 30, 2001

SDR 01-0158; Restore TMM PY-0102A Using Only PCS Hot Leg Temperature TE-0122HA Instead of the Sum of 50% of TE-0112HA and TE-0122HA; dated February 6, 2001

SDR 01-0184; Instrument Uncertainties for Tech Spec Test RO-216, "Service Water Flow Verification;" dated February 21, 2001

SDR 01-0208; FSAR Section 4.2.2, Design Cyclic Loads, is Incorrect; dated March 21, 2001

SDR 01-0310; Instrument Air System; dated March 19, 2001

SDR 01-0451; Loss of DC Power; dated April 4, 2001

SDR 01-0281; MO-38, "Auxiliary Feedwater System-Monthly Test Procedure," Revision 14; dated March 17, 2001

SDR 01-0297; EAR-2000-0501, "Replacement of Auxiliary Feedwater Pump (P-8A/B) and AFW Turbine Drive (K-8) Inboard and Outboard Bearing Stuffing Box Cooling

Water Valves; and Other Crane Model 222H Valves,” Revision 0; dated March 16, 2001

SDR 01-0434; ESS Pumps Component Cooling Water Piping Modification, dated April 3, 2001

SDR 01-0660; EAR-2000-0064, “Isolation of AFW Pump Turbine Steam Supply From CV-0522A,” Revision 3; dated May 7, 2001

SDR 01-0610; Provide Design Basis for Containment Isolation; dated May 22, 2001

SDR 01-1074; Remove VHP Pre-Trip Margin from FSAR; dated August 22, 2001

SDR 01-1134; SOP-3, “Safety Injection and Shutdown Cooling System,” Revision 49; dated November 12, 2002

SDR 01-1448; Calculated Impact of Decreasing Containment Spray Pump Flow Rates Before and after RAS on the FSAR Chapter 14 Dose Consequences; dated December 24, 2001

SDR 01-1453; Loss of AC Power; dated January 10, 2002

SDR 02-0029; EA-GAK-98-002, “CCW Heat Exchanger (E-54A/B) Tube Fouling Factor Acceptance Criteria,” Revision 2; dated January 17, 2002

SDR 02-0117; Replacement Engineering Safeguard Room Sump Level Transmitters with Level Indicators; dated February 21, 2002

SDR 02-0260; EAR-2001-0601, “Install Casing Vent Valves on Low Pressure Safety Injection Pumps P-67A and P-67B,” Revision 0; dated April 10, 2002

SDR 02-0706; FSAR-2259/2260/2261/2262-Provide Design Basis for Containment Isolation; dated August 23, 2002

SDR 02-0755; Reactor Protection System Scheme EK-06 (C-06); dated August 2, 2002

SDR 02-0980; QO-16, “Inservice Test Procedure - Containment Spray Pumps,” Revision 21; dated October 22, 2002

Condition Reports (CRs) Reviewed During the Inspection

CPAL0001274; Design/Procedure Deficiency for Large Break LOCA with Loss of 1-1 D/G; dated May 25, 2000

CAP030442; Potential Exists to Allow Modified Equipment to be returned to Service Prior to Appropriate 50.59 Screening, dated December 18, 2001

CAP030550; Focused Self-Assessment of Implementation of Revised 10 CFR 50.59 Rule; dated October 1, 2001

CPAL0104017; Untimely Update of FSAR Section 14.22, "Palisades Maximum Hypothetical Accident (MHA)"; dated March 6, 2002

CAP009587; PCV-3055A (VOP-3055 Air to Close Regulator) Appears High Out of Noms Band; dated July 26, 2002

CAP031860; 50.59 Screen Incorrectly Determined That No Safety SSCs Were Involved; dated October 29, 2002

CAP031861; 50.59 Screen Does Not Clearly Identify Affected Design Function; dated October 29, 2002

CAP031862; Knowledge Weakness Relative to 50.59 Screens for FSAR Changes; dated October 29, 2002

CAP031865; FSAR Change Request Processed Without 50.59 Screen; dated October 29, 2002

CAP031888; Enhancements Recommended for 10 CFR 50.59 Evaluations; dated October 30, 2002

CAP031919; Procedures do Not Contain Proper Guidance on Need for 10 CFR 50.59 Review; dated November 1, 2002

CAP032087; Verification Criteria Not Identified in Modification Packages; dated November 13, 2002

Condition Reports Initiated as a Result of Inspection Findings

CAP032360; Editorial Attention to Detail Associated with EAR-99-0206; dated December 5, 2002

CAP032368; Vendor Manual Not Placed in ERC Prior to Mod. Package Closeout; dated December 5, 2002

CAP032391; Post Modification Testing Does Not Meet Current Expectations; dated December 6, 2002

Miscellaneous

EA-CND-01-01; Calculated Impact of Decreasing Containment Spray Pump Flow Rates Before and after RAS on the FSAR Chapter 14 Dose Consequences; dated December 20, 2001

EAR-2001-0424; East Engineering Room Sump T-78A Level Transmitter LT-1110 Failing; dated February 21, 2002

Palisades Self-Assessment 200040; Modification and 10 CFR 50.59 Processes, dated October 21-24, 2002; dated November 13, 2002

Palisades Self-Assessment 2001-15; 10 CFR 50.59 Process; dated October 1, 2001

Revision 23 to the Final Safety Analysis Report (FSAR) Updated; dated October 30, 2001

2001 Annual Report of Facility Changes, Tests and Experiments; dated September 24, 2002

Procedures

ADMIN 3.07; 10 CFR 50.59 and 72.48 Reviews; Revision 13

MSE-E-5; Installation of Raychem Heat Shrinkable Insulation; dated May 4, 1999

MSE-E-5; Installation of Raychem Heat Shrinkable Insulation; dated February 10, 2001

NGA01F001H, "NMC Plant Access Training Self-Study Guide," dated May 31, 2002

NGA02F001H, "NMC Rad Worker Training Self-Study Guide," dated May 6, 2002

SOP-19; Instrument Air System; Revision 17

SOP-19; Instrument Air System; Revision 18

1R17 Permanent Plant Modifications

Modifications

EAR 1997-0658; Response to Palisades A/E Inspection Item # 230; Canceled November 5, 2002

EAR 1999-0035; Assess SC Interrupting Rating for DC Fuses in Safe Shutdown and 1E 125 VDC Circuits; dated January 28, 1999

EAR 1999-0206; Instrument Upgrade for EDG Voltage and Frequency; dated September 14, 1999

EAR 1999-0231; Operator Workaround due to Design Deficiency - AFW Pump P-8C; Canceled May 19, 2002

EAR 2000-0240; Replace Diode D7 on Diesel Generator 1-1 and 1-2; dated November 28, 2000

EAR 2000-0249; MV-ES3179 Valve has Bent Stem; dated May 30, 2001

EAR 2000-0342; TMM/VHP Trip Setpoint; dated February 22, 2002

EAR 2000-0343; TMM/VHP Pre-Trip Setpoint; dated June 20, 2001

EAR 2000-0354; Replacement of PS-1212 with New Model; dated October 30, 2000

EAR 2000-0442; Resonance of Vertical Structural Members that are Part of Upper Motor Backstop Assembly; Canceled September 26, 2001

EAR 2000-0491; Generic Molded Case Circuit Lighting Panel Breaker Replacement; dated August 28, 2000

EAR 2000-0528; Model Number Change for Replacement GE HFA Relay; dated September 2, 2000

EAR 2000-0533; EEQ Replacement of Rosemount Transmitters; dated May 6, 2002

EAR 2000-0627; Instrument Uncertainties for Tech Spec Test RO-216, "Service Water Flow Verification;" dated November 30, 2000

EAR 2000-0585; Evaluate and Select Replacement Valves due to Repetitive Failures and Operational Difficulty; dated January 3, 2002

EAR 2001-0153; Existing Design for Anderson Greenwood Crosby Valves (RV-6003 and RV-6004 is Obsolete; dated October 17, 2002

EAR 2001-0600; Replace Safeguards 2400V Underground Supply Cables to BUS 1 Charlie; December 14, 2001

EAR 2001-0601; Install Casing Vent Valves on Low Pressure Safety Injection Pumps P-67A and P-67B; dated December 13, 2001

EAR 2002-0162; Variable High Power and PreTrip Setpoint Change; dated June 14, 2002

FC-940; Emergency Diesel Generator Breakers & Protective Trip Logic Upgrade; dated November 6, 1995

Purchase Orders

PO G0374863; Farris Relief Valves; dated February 22, 2002

PO P010898; Swagelok Ball Valves; dated September, 18, 2002

PO 14130; Capacitor; dated November 1, 2002

Condition Reports (CRs) Reviewed During the Inspection

C-PAL-98-0546; Predictive/Preventive Program Weakness; dated April 3, 1998

CPAL0001147; No Engineering for Installed Modification to EDG 1-1 and 1-2 Control Circuits; dated April 21, 2000

CAP013738; Evaluate EDG 1-1 and 1-2 Fuel Oil System Modification for Effectiveness; dated February 28, 2001

CAP014921; Field Wiring Does Not Match Vendor Print for EDG 1-2 Remote Frequency Indicator; dated August 23, 2001

CAP015325; Adverse Trend Seen in Modifications Involving Contractors; dated November 1, 2001

CAP015811; Problems With Working at Risk Modifications; dated January 13, 2002

CAP015901; Modification Implementation Process is Not Robust Enough to Assure Procedure Revisions are Timely; dated January 29, 2002

CAP016245; Quality Review Team Identifies Errors in EARs; dated March 21, 2002

CAP030454; Plant Modification Process Failed to Identify Needed Procedure Revision; dated January 30, 2002

CAP030449; Engineering Errors Identified by the Quality Review Team (QRT); dated April 25, 2002

CAP030448; Quality Review Team (QRT) Identified Errors in Engineering Analyses and Engineering Assistance Requests; dated April 10, 2002

CAP014921; Field Wiring Does Not Match Vendor Print for EDG 1-2 Remote Frequency Indicator; dated July 27, 2002

CAP015498; Modification Package Does Not Delineate Review of All Environmental Factors; dated July 27, 2002

CAP032087; Verification Criteria Not Identified in Modification Packages; dated November 13, 2002

Condition Reports Initiated as a Result of Inspection Findings

CAP032342; 50.59 Safety Review Questions Not Answered Correctly; dated December 4, 2002

CAP032345; 50.59 Safety Review Questions Not Answered Correctly; dated December 4, 2002

CAP032371; Errors in Engineering Analysis Used to Remove PT-1805A from EQ Program; dated December 5, 2002

CAP032372; Unresolved Question Regarding Historical EQ Maintenance for PT-1805A; dated December 5, 2002

CAP032376; Incomplete EQ Maintenance Requirements in Palisades Equipment

Database; dated December 5, 2002

CAP032464; Potential Regulatory Guide 1.97 Deviation; dated December 12, 2002

Miscellaneous

DBD-7.01; Electrical Equipment Qualification Program; dated September 4, 2002

DBD-7.02; EQ Master Equipment List; dated February 8, 2002

EA-BHS-EQ-2000-03; Remove PT-1805A [Containment Pressure Transmitter] from EQ Master Equipment List (in DBD 7.02); dated February 6, 2001

EA-C-PAL-97-0808A; Determination of Offsite Atmospheric Dispersion Factors (X/Q's) for Radiological Dose Consequence Analyses; Revision 0

EA-GAK-98-002; CCW Heat Exchanger (E-54A/B) Tube Fouling Factor Acceptance Criteria; Revision 2

EQ File Report #E-48, PS-1; United Electric Controls Model J302-553 Pressure Switch; dated December 20, 2000

Final Safety Analysis Report Update; Chapter 7, "Instrumentation and Controls," Appendix 7C, "Regulatory Guide 1.97 Rev 3 Parameter Summary Table"; Revision 23

Final Safety Analysis Report Update; Chapter 7, "Instrumentation and Controls," Figure 7-24, "Logic Diagram Containment High Pressure Signal"; Revision 21

MMP-10; Review of Procurement Documents by Procurement Engineering; Revision 9

MSI-I-12; Maintaining Environmental Qualification for Rosemount Transmitters; dated October 2, 1989

MSI-I-12; Maintaining Environmental Qualification for Rosemount Transmitters; dated June 18, 1999

RI-6B; Containment Pressure Channels Calibration - Finals; dated April 30, 2001

RI-6B; Containment Pressure Channels Calibration - Finals; dated September 27, 2001

Product Data Sheet 2235; [Rosemount Inc.] Model 1152 Alphaline® Nuclear Pressure Transmitters; dated October 1986

TM-2000-006; Support Interim Installation of EAR 2000-0064, "Isolation of the Auxiliary Feedwater (AFW) Pump Turbine Steam Supply from Pressure Control Valve CV-0522A"; dated February 11, 2000

Palisades Self-Assessment 200040; Modification and 10 CFR 50.59 Processes, October 21-24, 2002; dated November 13, 2002

Procedures

Advanced Maintenance Management System; PT-1812A EEQ Maintenance Requirements; dated December 4, 2002

ADMIN 5.27; Post Modification Testing; Revision 1

ADMIN 9.03; Facility Change; Revision 18

ADMIN 9.11; Engineering Analysis; Revision 13

ADMIN 9.17; Functional Equivalent Substitution; dated May 3, 2001

ADMIN 9.19; Engineering Design Change; Revision 3

ADMIN 9.28; Engineering Assistance Request; Revision 7

LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
IEEE	Institute of Electrical and Electronics Engineers
NEI	Nuclear Energy Institute
NMC	Nuclear Management Company
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
USAR	Updated Safety Analysis Report