



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

February 4, 2013

Mr. Anthony Vitale
Vice-President, Operations
Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043-9530

SUBJECT: PALISADES NUCLEAR PLANT
EVALUATIONS OF CHANGES, TESTS, OR EXPERIMENTS AND
PERMANENT PLANT MODIFICATIONS BASELINE INSPECTION REPORT
05000255/2013007

Dear Mr. Vitale:

On January 24, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications inspection at your Palisades Nuclear Plant. The enclosed inspection report documents the inspection results which were discussed on January 24, 2013, with you and 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.

No findings were identified during this inspection.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Robert C. Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-255
License Nos. DPR-20

Enclosure: Inspection Report 05000255/2013007
w/Attachment: Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No.: 05000255/2013007

Licensee: Entergy Nuclear Operations, Inc.

Facility: Palisades Nuclear Plant

Location: Covert, MI

Dates: January 7, 2013 – January 24, 2013

Inspectors: A. Dahbur, Senior Reactor Inspector, Lead
D. Szwarc, Reactor Inspector
I. Hafeez, Reactor Inspector

Approved by: Robert C. Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Enclosure

SUMMARY

IR 05000255/2013007, 01/07/2013 – 01/24/2013; Palisades Nuclear Plant; Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications.

This report covers a two-week announced baseline inspection on evaluations of changes, tests, or experiments and permanent plant modifications. The inspection was conducted by Region III based engineering inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealed Findings

No findings of significance were identified.

B. Licensee-Identified Violations

No violations of significance were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity

1R17 Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications (71111.17)

.1 Evaluation of Changes, Tests, or Experiments

a. Inspection Scope

From January 7, 2013 through January 24, 2013, the inspectors reviewed five safety evaluations performed pursuant to Title 10, Code of Federal Regulations (CFR) 50.59 to determine whether the evaluations were adequate and that prior NRC-approval was obtained as appropriate. The minimum sample size of six safety evaluations was not achieved, because the licensee had only performed five safety evaluations during the sample period. The inspectors also reviewed fourteen screenings where licensee personnel had determined that a 10 CFR 50.59 evaluation was not necessary. The inspectors reviewed these documents to determine if:

- the changes, tests, or experiments performed were evaluated in accordance with 10 CFR 50.59 and that sufficient documentation existed to confirm that a license amendment was not required;
- the safety issue requiring the change, tests or experiment was resolved;
- the licensee conclusions for evaluations of changes, tests, or experiments were correct and consistent with 10 CFR 50.59; and
- the design and licensing basis documentation was updated to reflect the change.

The inspectors used, in part, Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Implementation," 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," dated November 2000. The inspectors also consulted Part 9900 of the NRC Inspection Manual, "10 CFR Guidance for 10 CFR 50.59, Changes, Tests, and Experiments."

This inspection constituted five samples of evaluations and fourteen samples of changes as defined in IP 71111.17-04.

b. Findings

No findings of significance were identified.

.2 Permanent Plant Modifications

a. Inspection Scope

From January 7, 2013 through January 24, 2013, the inspectors reviewed eight permanent plant modifications including two design basis calculations that had been installed in the plant or modified during the last three years. This review included in-plant walkdowns for portions of the modified Containment Spray, Station Battery Charger and Emergency Diesel Generator starting air systems. The modifications were selected based upon risk-significance, safety significance, and complexity. The inspectors reviewed the modifications selected to determine if:

- the supporting design and licensing basis documentation was updated;
- the changes were in accordance with the specified design requirements;
- the procedures and training plans affected by the modification have been adequately updated;
- the test documentation as required by the applicable test programs has been updated; and
- post-modification testing adequately verified system operability and/or functionality.

The inspectors also used applicable industry standards to evaluate acceptability of the modifications. The list of modifications and other documents reviewed by the inspectors is included as an Attachment to this report.

This inspection constituted eight permanent plant modification samples as defined in IP 711111.17-04.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

.1 Routine Review of Condition Reports

a. Inspection Scope

From January 7, 2013 through January 24, 2013, the inspectors reviewed several corrective action process documents that identified or were related to 10 CFR 50.59 evaluations and permanent plant modifications. The inspectors reviewed these documents to evaluate the effectiveness of corrective actions related to permanent plant modifications and evaluations of changes, tests, or experiments. In addition, corrective action documents written on issues identified during the inspection were reviewed to verify adequate problem identification and incorporation of the problems 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

.1 Exit Meeting Summary

On January 24, 2013, the inspectors presented the inspection results to Mr. A. Vitale and other members of the licensee staff. The licensee personnel acknowledged the inspection results presented and did not identify any proprietary content. The inspectors confirmed that all proprietary material reviewed during the inspection was returned to the licensee staff.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

A. Vitale, Site Vice-President
A. Bono, Design Engineer
D. Fitzgibbon, Design Engineering Manager
O. Gustafson, Licensing Manager
J. Haumersen, System Engineering Manager
J. Dills, Operations Manager
C. Plachta, Quality Assurance Manager
R. White, Assistant Operations Manager
B. Dotson, Licensing Specialist
T. Williams, General Manager, Plant Operations
C. Arnone, Nuclear Safety Assurance Director
C. Sherman, Radiation Protection Manager
D. Kennedy, Senior Engineer
G. Heisterman, Maintenance Manager
M. Mlynarek, Chemistry Manager
N. Trela, System Engineer
P. Russel, Production Manager

Nuclear Regulatory Commission

T. Taylor, Senior Resident Inspector, Palisades

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened, Closed, and Discussed

None

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather, that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

CALCULATIONS

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|--------------------|--|-------------------------|
| EA-ELEC-AMP-042 | Pressurizer Heater Current Requirement | 0 |
| SUT1-2/SUT1-2/ALTC | Startup Transformer1-2 Load Tap Changer Automatic Controls | 1 |
| EA-FC-958-04 | Calculation to Size and Provide Instrumentation Levels for the Replacement of the Diesel Fuel Oil Tank T-10 with T-10A | 3 |

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|-------------------|--|-------------------------|
| CR-PAL-97-0355 | Procedural Guidance for Opening CV-3070/3071 HPSI Sub Cooling Valves | March 11, 1997 |
| CR-PLP-2007-04259 | Issues Related to EDG Fuel Oil Tank Volume Calculations | September 21, 2007 |
| CR-PLP-2008-01392 | MOC Switch Bayonet Operator With Broken Welds. | March 26, 2008 |
| CR-PLP-2008-01496 | Diesel Fuel Oil Storage Tank T-10A Level Indication Dimension Discrepancy | April 1, 2008 |
| CR-PLP-2009-03982 | 50.59 Evaluation for EC8350 did not Properly Address Question 2 | August 19, 2009 |
| CR-PLP-2009-04881 | Formatting of a Particular Operations Procedure is Prone to Human | October 21, 2009 |
| CR-PLP-2009-05236 | EA-EC8350-04 Acceptance Criteria not Met | November 12, 2009 |
| CR-PLP-2010-05462 | 2400 Volts Bus 1-C was Reading Low Out of Spec | October 22, 2010 |
| CR-PLP-2012-1775 | PI-1490, K6B Starting Air Pressure Indicator for the Emergency Diesel Generator 1-2, was Reading Abnormally High | March 19, 2012 |

DRAWINGS

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|-----------------|--|-------------------------|
| E-1, Sheet A | Single Line Meter and Relay Diagram | 11 |
| E-121, Sheet 1A | Schematic Diagram Turbine Control | 8 |
| E-136, Sheet 1 | Schematic Diagram 2400V and 4160V Bus Transfer | 31 |
| E-136, Sheet 2 | Schematic Diagram 2400V and 4160V Bus Transfer | 31 |

DRAWINGS

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|----------------------|---|--------------------------------|
| E-17, Sheet 9 | Logic Diagram Generator Trips and fast Transfer | 23 |
| M-214, Sheet 1 | Piping and Instrumentation Diagram, Lube Oil, Fuel Oil and Diesel Generator Systems | 77 |
| M-398, Sheet 34 | Level Settings Diagram, Diesel Oil Storage Tank No. T-10A | 9 |

10 CFR 50.59 EVALUATIONS

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|----------------------|---|--------------------------------|
| 09-0601 | Core operating Limits Report (COLR) | January 19, 2010 |
| 09-0602 | EC 8350 – Replace Containment Spray Isolation Valves per GSI-191 Resolution | November 16, 2009 |
| 09-0680 | Radiological Calculations for AST Implementation | December, 14, 2009 |
| 10-0137 | Containment Response for LOCA using Gothic 7.2a | July 15, 2010 |
| 12-0402 | EC 27518 – Motor Control Center Buckets Replacement | December 18, 2012 |

10 CFR 50.59 SCREENINGS

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|----------------------|--|--------------------------------|
| 09-0687 | Modify EX-10 | 0 |
| 10-0053 | Technical Specifications Basis B-3.8.1 | February 11, 2010 |
| 10-0065 | ESSO-1, Containment Spray Header Fill | February 17, 2010 |
| 10-0077 | SOP-3/Safety Injection and Shutdown Cooling System | March 1, 2010 |
| 10-0104 | Station Power | March 11, 2010 |
| 10-0180 | Balance of Plant Actions Following A Reactor Trip | April 26, 2010 |
| 10-0361 | EC17255, Installation of Vortex Suppression Devices in the Safety Injection Refueling Water Tank, T-58 | September 1, 2010 |
| 10-0488 | Update Load Profile for Battery Test | 0 |
| 10-0520 | Revise FSAR Description of the Loss of Load Reactor Trip | 0 |
| 10-0528 | Fast Transfer Test | 0 |
| 11-0129 | Update EEQ Files for MOV Long Life Grease | April 6, 2011 |
| 11-0221 | SOP-16, Component Cooling Water System | October 22, 2010 |
| 11-0326 | License Basis Document Change Request 10-013 | August 18, 2011 |

10 CFR 50.59 SCREENINGS

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|----------------------|---|--------------------------------|
| 11-203 | Replace Control Room Subcooling Recorder | April 27, 2011 |
| 12-0081 | EC 34615 - Establish Pickup Setting for Relays 305L and 305-R | March 1, 2012 |

MODIFICATIONS

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|----------------------|---|--------------------------------|
| EC 08005 | Replacement of 2400 SWGR Cubicle | |
| EC 13204 | Second Level Voltage Relay | 0 |
| EC 16993 | Correct Level Settings for Diesel Fuel Oil Storage Tank T-10a | April 14, 2010 |
| EC 5885 | Emergency Diesel Generator 1-1 and 1-2 Starting Air System Reliability Upgrades | 0 |
| EC 6432 | Palisades Emergency Diesel Generator Diesel Fuel Oil Storage Requirements | 1 |
| EC 25561 | Startup Transformer 1 – 2 Setpoint Change | October 25, 2010 |

PROCEDURES

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|----------------------|--|--------------------------------|
| ESSO-14 | Flush HPSI Sub-cooling Valves | 0 |
| SOP-3 | Safety Injection and Shutdown Cooling System | 89 |
| SOP-16 | Component Cooling Water System | 38 |
| ESSO-1 | Containment Spray Header Fill | 14 |

LIST OF ACRONYMS USED

| | |
|-------|---|
| ADAMS | Agencywide Documents Access and Management System |
| AR | Action Report |
| ASME | American Society of Mechanical Engineers |
| CFR | Code of Federal Regulations |
| CNO | Chief Nuclear Officer |
| DRS | Division of Reactor Safety |
| EC | Engineering Change |
| FIN | Finding |
| HPSI | High Pressure Safety Injection |
| IMC | Inspection Manual Chapter |
| MOV | Motor-Operated Valve |
| NEI | Nuclear Energy Institute |
| NRC | U.S. Nuclear Regulatory Commission |
| PARS | Public Available Records System |
| SPAR | Standardized Plant Analysis Risk |
| SSC | Structures, Systems and Components |
| TS | Technical Specification |
| UFSAR | Updated Final Safety Analysis Report |

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Vice-President, Operations
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OFFICIAL RECORD COPY

Letter to Mr. Mr. Anthony Vitale from Mr. Robert C. Daley dated February 4, 2013.

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