



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

December 3, 2010

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

**SUBJECT: PALISADES NUCLEAR PLANT NRC POST-APPROVAL SITE INSPECTION
FOR LICENSE RENEWAL, INSPECTION REPORT 05000255/2010010(DRS)**

Dear Mr. Schwarz:

On October 22, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed Phase I of the Post-Approval Site Inspection for License Renewal at your Palisades Nuclear Plant. The enclosed report documents the inspection activities, which were discussed on October 22, 2010, with you and other members of your staff.

This inspection was an examination of activities conducted under your renewed license as they relate to the completion of commitments made during the renewed license application process and compliance with the Commission's rules and regulations and the conditions of your operating license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the sample selected for review, one NRC-identified finding of very low safety significance was identified. The finding involved violation of NRC requirements. However, because of its very low safety significance, and because the issue was entered into your corrective action program, the NRC is treating the issue as Non-Cited Violation (NCV) in accordance with Section 2.3.2 of the NRC Enforcement Policy. The NRC staff did not identify any instances of incomplete commitments with respect to timeliness or adequacy.

If you contest the subject or severity of the finding, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Palisades Nuclear Plant. In addition, if you disagree with the cross-cutting aspect assigned to the finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region III, and the NRC Resident Inspector at the Palisades Nuclear Plant.

C. Schwarz

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any), 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/

Ann Marie Stone, Chief
Engineering Branch 2
Division of Reactor Safety

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

Enclosure: Inspection Report 05000255/2010010
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-255

License No: DPR-20

Report No: 05000255/2010010

Licensee: Entergy Nuclear Operations, Inc.

Facility: Palisades Nuclear Plant

Location: Covert, MI

Dates: October 4 – October 22, 2010

Inspectors: B. Jose, Senior Reactor Engineer (Lead)
T. Bilik, Senior Reactor Engineer

Approved by: Ann Marie Stone, Chief
Engineering Branch 2
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000255/2010010; 10/4/2010 – 10/22/2010; Palisades Nuclear Plant; Post Approval Site Inspection for License Renewal

The inspection was conducted by two regional based inspectors. One finding was identified by the inspectors. The finding was considered a Non-Cited Violation (NCV) of NRC regulations. The significance of most of the findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Cross-cutting aspects are determined using IMC 0310, "Components within Cross-Cutting Areas." Findings for which the SDP does not apply may be Green or assigned a severity level after NRC management review. No instances were noted of incomplete license renewal commitments with respect to timeliness or adequacy. 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

Cornerstone: Mitigating Systems

- Green. A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to accomplish activities affecting quality in accordance with procedures. Specifically, the licensee's vendor examiner for Non-Destructive Examination (NDE) failed to perform an ultrasonic (UT) wall thickness (one-time inspection) examination in accordance with procedures on the T-81, Primary System Makeup Storage Tank. The licensee initiated corrective action document CR-PLP-2010-04653 to address the issue.

The finding was determined to be more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. The failure to perform an adequate UT examination did not assure that the intended function of the tank would be maintained consistent with the current licensing basis through the extended period of operation. This finding is of very low safety-significance (Green) because the inspectors answered no to all of the characterizations worksheet questions in Table 4a of IMC 0609.04. This finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee did not effectively communicate expectations regarding procedural compliance and the examiner failed to follow procedures [H.4 (b)]. (Section 4OA5.1.b (1))

B. Licensee-Identified Violations

No violations of significance were identified.

REPORT DETAILS

Summary of Plant Status

Palisades Nuclear Plant was in a refueling outage during the period of this inspection.

4. OTHER ACTIVITIES

4OA5 Other Activities

.1 Post-Approval Site Inspection for License Renewal (Phase I) – IP 71003

a. Inspection Scope

(1) Review of Newly Identified Structures Systems and Components (SSC)

The inspectors discussed the identification of new SSCs, under the purview of Title 10 of the Code of Federal Regulations (CFR) 54.37(b), with the licensee's license renewal staff. The licensee personnel indicated that no new components had been identified that should have been within the scope of its license renewal program.

(2) Review of Revised Commitments

As part of reviewing commitments associated the aging management programs (AMPs) within the scope of the Phase I inspection, the inspectors determined that all five of the commitment revisions (Commitments 7, 23, 26, 40, and 43) were justified. However, inspectors noted that the licensee's commitment change evaluation form (EN-LI-110-ATT-9.4, Revision 2) was not in alignment with NEI 99-04, Revision 0 and contained mistakes. The licensee initiated Condition Report (CR)-HQN-2010-01101 to address the issue. The inspectors also reviewed the licensee's commitment tracking program to evaluate its effectiveness.

(3) Review of Commitments

The inspectors reviewed supporting documents including completed surveillance records, conducted interviews, observed non-destructive examination (NDE) activities, performed visual inspection of structures and components, including those not accessible during power operation, and observed the activities described below to verify that the licensee completed the necessary actions to comply with the license conditions that are part of the renewed operating license. The inspectors verified that the licensee implemented the "outage related" aging management programs included in NUREG-1871, "Safety Evaluation Report (SER) related to the license renewal (LR) of the Palisades Nuclear Plant in accordance with 10 CFR Part 54, "Requirements for the Renewal of Operating Licenses for Nuclear Power Plants." The inspectors also verified a selected sample of corrective actions taken as a consequence of the LR inspection.

The inspectors reviewed portions of the commitments below, which are referenced in Appendix A of the SER. Activities observed related to these commitments are also listed:

1. Item 1, Amendment to the License Renewal Application (LRA) Pursuant to 10 CFR 54.21(b)

Commitment 1 specified that each year, following the submittal of the Palisades LRA and at least three months before the scheduled completion of the NRC review, Palisades will submit an amendment to the application pursuant to 10 CFR 54.21(b). The amendment was to identify any changes to the Current Licensing Basis of the facility that materially affected the contents of the LRA, including the FSAR supplement, which had not already been submitted.

The licensee submitted the annual update on March 21, 2006, within one year of the LRA submittal, more than three months before completion of the NRC review, and less than one year from issuance of the renewed license on January 17, 2007.

Upon review of the letter, and based on review of the timeliness and adequacy of the licensee actions, the inspectors determined that the licensee met Commitment Item 1.

2. Item 6, Revised Alloy 600 Program

Commitment 6 specified that the licensee would revise the Alloy 600 Program to update the Primary Water Stress Corrosion Cracking (PWSCC) corrosion rate assessments and inspection program consistent with the latest NRC requirements and industry commitments (e.g., EPRI Report 10100787 "Materials Reliability Program: Primary System Piping System Butt Weld Inspection and Evaluation guidelines [MRP-139],"(August 2005)). The updated program was to be submitted for NRC review and approval by March 24, 2008.

The licensee addressed the commitment through the submittal of the update incorporated into engineering procedure EM-09-22, "Nickel-Alloy Program," Revision 0. The procedure was submitted in a letter to the NRC dated March 13, 2008.

Upon review of the letter, and based on review of the timeliness and adequacy of the licensee actions, the inspectors determined that the licensee met Commitment Item 6.

3. Item 13, revised Boric Acid Corrosion Control Program

Commitment 13 specified that the licensee would revise applicable procedures to include explicit acceptance criteria for boric acid inspections. The licensee addressed the commitment by revising procedure EN-DC-319 (Revision 6), inspection and evaluation of boric acid leaks and EM-09-20 (Revision 3), boric acid corrosion control program. Upon review of the procedures and based on the timeliness and adequacy of the licensee's actions, the inspectors concluded that the licensee met Commitment Item 13.

4. Item 19, revised Structures Monitoring Program

Commitment 19 stated that the structures monitoring program shall be revised to include specific inspection criteria and documentation requirements for verifying

walls, ceilings and floors that serve as fire protection program fire barriers, are verified to be free from aging related degradation that would impact the fire barrier's intended functions. The licensee addressed this commitment by revising procedure EM-25-01 (Revision 3), "maintenance rule structural monitoring." The inspectors reviewed this procedure and based on the timeliness and adequacy of the licensee's actions concluded that the licensee met Commitment Item 19.

5. Item 20 and 21, revised Fire Protection Program procedure

Commitment 20 stated that plant procedures shall be revised to more specifically address aging related degradation and expectations for documentation of fire door conditions. Commitment 21 specified that the licensee develop and implement procedures to perform visual inspections for fire door clearances. The licensee addressed these commitments by revising procedure FPSP-SO-2 (Rev.6), "Inspection and Testing of Palisades Plant Fire Doors." The inspectors reviewed this procedure and based on the timeliness and adequacy of the licensee's actions concluded that the licensee met Commitment Items 20 and 21.

6. Item 22, revised Fire Protection Program procedure

Commitment 22 specified that the licensee revise diesel driven fire pump performance test procedures to more specifically address the requirement to inspect and monitor fuel oil supply line for aging degradation and to document inspection results. The licensee addressed this commitment by revising procedure RO-52 (Revision 29), "Fire Suppression Water System Functional Test and Fire Pump Capacity Test." The inspectors reviewed this procedure and based on the timeliness and adequacy of the licensee's actions concluded that the licensee met Commitment Item 22.

7. Item 26, Non-EQ Electrical Commodities Condition Monitoring Program

Commitment Item 26 documents that the licensee agreed to develop and implement a Non-EQ Electrical Commodities Condition Monitoring Program prior to the period of extended operation. This new program will be consistent with NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," Sections XI.E1, "Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification (EQ) Requirements," Section XI.E2, "Electrical Cables Not Subject to 10 CFR 50.49 EQ Requirements Used in Instrumentation Circuits," and XI.E3, "Inaccessible Medium-Voltage Cables Not Subject to 10 CFR 50.49 EQ Requirements."

The Non-EQ electrical commodities condition monitoring program manages aging in selected Non-EQ commodity groups within the scope of license renewal. Program activities are responsive to the staff guidance provided in the GALL report and industry standards. The applicant identified each electrical commodity group requiring aging management for the three applicable sections of the GALL report with the additional guidance provided in interim staff guidance (ISG)-2 and draft ISGs-5, 15, and 17, as follows:

- GALL AMP XI.E1 requires a periodic inspection program that visually inspects accessible cables and connections in adverse localized environments with any identified degradation evaluated and, as appropriate per plant procedures,

entered into the plant corrective action process. The Non-EQ electrical commodities condition monitoring program predominantly inspects for adverse aging from temperature, radiation, or moisture in the presence of oxygen.

- GALL AMP XI.E2 requires routine calibration tests to identify potential aging degradation of cables and connections used in low-level signal applications sensitive to reduction in insulation resistance (IR) such as radiation monitoring and nuclear instrumentation. This testing is revised as discussed in draft ISG-15, which allows testing every 10 years in lieu of Technical Specifications (TS) surveillance test trending. The Non-EQ Electrical Commodities Condition Monitoring Program subjects sensitive instrumentation circuits, identified as requiring aging management, to periodic testing.
- GALL AMP XI.E3 requires a periodic test to indicate the condition of the conductor insulation for those cables within the scope of license renewal exposed to long periods of high moisture (greater than a few days at a time) and subjected to voltage stress (energized greater than 25 percent of the time). Periodic testing on these medium-voltage cables will indicate the insulation condition. The Non-EQ Electrical Commodities Condition Monitoring Program includes periodic inspections of underground raceway manholes for the accumulation of water over the medium-voltage cables. Periodic inspections of underground manholes for the accumulation of water in the medium-voltage cable manholes will minimize the effects of water inside the underground manholes.

The inspectors conducted interviews and reviewed the implementing documents. Specific documents are listed in the Attachments of this report. The inspectors observed the following licensee activities to implement this commitment:

- nuclear instrumentation cable IR tests in the control room under WO51657522; and
- high voltage withstand and Tan-Delta tests of the feeder cable to 2400 VAC Switchgear Bus 1C under WO 198409.

To address a problem with the flooding of manholes in Switchgear Bus IC room related to "Inaccessible Medium-Voltage Cables Not subject to 10 CFR 50.49 Environmental Qualification Requirements," the Electrical Maintenance Group checked the manholes monthly for water based on recurring Work Order 50085957 Task 1.

A review by the inspectors of manhole inspection results showed occasional flooding of the manholes during periods of heavy rain. The cables in the manholes are not meant to be submerged in water for extended periods of time. The results of Tan-delta and high voltage withstand tests reviewed by the inspectors did not indicate any degradation of cable insulation. The licensee indicated that, plans are in place to install permanent sump pumps in these manholes.

The inspectors concluded and the licensee confirmed that Commitment No. 26 has not been completed to date.

8. Item 27, One-Time Inspection Program

Commitment Item No. 27 documents that the licensee agreed to develop and implement an aging management program consistent with, but includes exceptions to, NUREG-1801, Generic Aging Lessons Learned (GALL), Section XI.M32, One-Time Inspection.”

The inspectors noted that the One-Time Inspection Program is consistent with NUREG 1801, Section XI.M33, “Selective Leaching of Materials,” with the exception noted in Condition Report CR-PLP-2010-04516, and portions of NUREG-1801, Section XI.M29, “Above Ground Carbon Steel Tanks” that are associated with the thickness measurement of tank bottom surfaces.

The One-Time Inspection Program is a new program that addresses potentially long incubation periods for certain aging effects, including various corrosion mechanisms, cracking, and selective leaching, and provides a means for verifying that an aging effect is either not occurring or progressing so slowly as to have negligible effect on the intended function of the structure or component. Hence, the One-Time Inspection Program provides measures for (a) verifying an aging management program is not needed; (b) verifying the effectiveness of an existing program; or (c) determining that degradation is occurring, which will require evaluation and corrective action.

The program elements include: (a) determination of appropriate inspection sample size; (b) identification of inspection locations; (c) selection of examination technique, with acceptance criteria; and (d) evaluation of results to determine the need for additional inspections or other corrective actions. The inspection sample includes locations where the most severe aging effect(s) would be expected to occur. Inspection methods may include visual (or remote visual), surface or volumetric examinations, or other established NDE techniques.

This program is used to (a) verify the effectiveness of water chemistry control for managing the effects of aging in portions of piping exposed to a treated water environment; (b) manage the aging effects of loss of material due to aging mechanisms such as general, crevice, pitting, and galvanic corrosion; selective leaching; and Micro biologically Induced Corrosion (MIC); and (c) verify that cracking due to stress corrosion cracking or cyclic loading, in small bore (< 4” NPS) ASME Class 1 piping, is not occurring.

The inspectors interviewed the program owner, reviewed implementing procedures and records of completed inspections, and performed direct observation of NDE examinations in the field as part of the One-Time Inspection Program. These examinations included:

- A visual testing (VT) of stainless steel piping, M-980 (EHC reservoir), in accordance with WO00204074;
- VT of FW turbine K-7B lube oil to filter valve, PCV-1448, in accordance with WO00203163; and
- VT of the pressurizer spray valve nozzle, T-72 in accordance with WO 00139916.

As part of LRA Section B.2.1.13, "One Time Inspection Program," one-time visual and hardness measurements were to be performed on accessible locations of a select set of components of each material type (i.e., cast iron and brasses) to determine whether selective leaching has occurred and whether the resulting loss of strength and/or material will affect the intended functions of those components during the period of extended operation. The inspectors reviewed completed examinations for WO 210032, Screen House, F-2A (Housing for BS-1318) P-7A Basket and WO 51624921, Inspection and Cleaning of South Intake Bay.

In addition, the inspectors observed a one-time inspection involving the ultrasonic testing (UT) of Primary System Makeup Storage Tank T-81, in accordance with WO 51634112, related to "Above Ground Carbon Steel Tanks" that are associated with the thickness measurement of tank bottom surfaces.

The inspectors also noted in the LRA, the licensee stated that, aging management program for "selective leaching of materials" will be consistent with the GALL report. The GALL specified visual examination and hardness testing to determine if selective leaching is occurring. The inspectors identified that the licensee is performing scraping/probing test instead of hardness test to determine if selective leaching is occurring. The inspectors noted that, while scraping/probing may be justified as an alternative to hardness testing, the licensee needed to document a commitment change with proper justification. The licensee agreed to revise Commitment No. 27 and documented the concern in Condition Report CR-PLP-2010-04516.

The inspectors concluded and the licensee confirmed that Commitment No. 27 has not been completed to date.

b. Findings and Observations

(1) Failure to Perform Ultrasonic Examination on Primary System Makeup Storage Tank in Accordance with Procedures

Introduction: A finding of very low safety-significance and associated Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure of a licensee vendor NDE examiner to accomplish activities affecting quality in accordance with procedures.

Description: On October 7, 2010 the inspectors observed a licensee vendor NDE examiner performing an ultrasonic wall thickness (one-time inspection) examination on the T-81, Primary System Makeup Storage Tank. The inspectors identified that the examiner had failed to perform the examination in accordance with the required procedures CEP-NDE-0505, Revision 4, "Ultrasonic Thickness Examination," and CEP-NDE-0400, Revision 3, "Ultrasonic Examination." Specifically, the inspectors noted that a number of procedural requirements had not been met during the examination, including changing the couplant type without recalibration and failing to verify temperature requirements.

The inspectors noted the ultrasonic thickness (UT) procedure was for "informational use only," as were the other NDE procedures. The inspectors had also previously noted a lack of compliance on other NDE examinations including improper lighting verification on

VT examinations by another examiner, and a failure to delineate acceptance criteria in the work orders.

When the inspectors queried the examiner as to why the procedural requirements were not met, the examiner stated the requisite procedure had not been provided and the examiner was not given a pre-job brief which adequately detailed the expectations. The examiner concluded the examination was for informational purposes only and performed the examination based on previous experience. In response to NRC questions, the licensee initiated CR-PLP-2010-04653 to address the concerns and the examination was subsequently completed as required.

Analysis: The inspectors determined that failure to perform a one-time inspection on the Primary System Makeup Storage Tank (T-81) in accordance with procedures was contrary to 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," and was a performance deficiency.

The finding was determined to be more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, the failure to perform an adequate UT examination did not assure that the intended function of the tank would be maintained consistent with the current licensing basis through the extended period of operation.

The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase I - Initial Screening and Characterization of findings," Table 4a for the mitigating system cornerstone. The inspectors determined that the finding was of very low safety significance (Green) because the inspectors answered no to all of the worksheet questions. Specifically, once completed correctly, the licensee confirmed operability and no loss of safety function.

This finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee did not effectively communicate expectations regarding procedural compliance and the examiner failed to follow procedures. H.4(b)

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," states in part that, activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

Section 5.3.1 of CEP-NDE-0505 "Ultrasonic Thickness Examination" required "The Temperature of the component under examination and the calibration block shall be within 25° F." Also, Section 5.3.1.2.2 of CEP-NDE-0400, "Ultrasonic Examination" required "The same couplant to be used in the examination shall also be used during calibration."

Contrary to the above, on October 7, 2010, a licensee vendor NDE examiner performing an ultrasonic wall thickness (one-time inspection) examination on the T-81, Primary System Makeup Storage Tank failed to verify the temperature requirement specified in Section 5.3.1 of CEP-NDE-0505. Also, the examiner used couplant Ultragel II during calibration and demineralized water during examination contrary to Section 5.3.1.2.2 of

CEP-NDE-0400. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program as CR-PLP-2010-04653, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy (NCV 05000255/2010010-01).

(2) Adequacy of the One-Time Inspections Using Remote Visual Examinations

Introduction: An unresolved item (URI) was identified by the inspectors involving potential inadequacies in the One-Time Inspection Program.

Description: The inspectors were concerned about the reliability of the results of several one-time boroscopic inspections (remote visual) performed to detect loss of material due to crevice, pitting, general corrosion etc. During some of the inspections witnessed, the inspectors observed that the Character Card was calibrated perpendicular to the boroscope, but the surface being examined was parallel to the boroscope. Also, several visual examination record sheets reviewed by the inspectors contained reference to 18 percent neutral gray card instead of the character card, inspection angle of 30 to 45 degrees as opposed to the actual angle of zero degrees used during examinations. The inspectors were also concerned this examination would not be likely to detect pitting due to the geometric constraints of the areas examined and the non-flexible boroscope used. The licensee captured these concerns in Condition Reports CR-PLP-2010-5624, CR-PLP-2010-5283 and CR-PLP-2010-04836.

This examination adequacy issue is considered unresolved pending reconciliation of the boroscopic inspection results and establishing the basis for the manner in which the one-time inspection commitment is met by the licensee. This will be inspected during the IP 71003 Phase II team inspection (URI 05000255/2010010-02).

4OA6 Management Meetings

.1 Exit Meeting Summary

On October 22, 2010, the inspectors presented the inspection results to Mr. C. Schwarz and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

C. Schwarz, Site Vice-President
T. Kirwin, Plant Manager
J. Miksa, Programs Engineering Manager
B. Kemp, Design Engineering Manager
P. Anderson, Licensing Manager
B. Dotson, Licensing Supervisor
K. Smith, LR Project Manager
M. Cimok, One-Time Inspection Owner
S. Wolownik, Operations
J. Erickson, Licensing

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000255/2010010-01	NCV	Failure to Perform Ultrasonic Examination on Primary System Makeup Storage Tank in Accordance with Procedures. (Section 4OA5.1.b (1))
05000255/2010010-02	URI	Adequacy of the One-Time Inspections Using Remote Visual Examinations. (Section 4OA5.1.b (2))

Closed

05000255/2010010-01	NCV	Failure to Perform Ultrasonic Examination on Primary System Makeup Storage Tank in Accordance with Procedures. (Section 4OA5.1.b (1))
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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 of 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.

40A5 Other Activities

License Renewal Program Basis Documents

NUREG-1871; Safety Evaluation Report Related to the License Renewal of Palisades Nuclear Plant; January 2007

LR-AMPBD-21-ONETIME; License Renewal Aging Management Program basis Document; Revision 2

Inspections Observed

WO 51634112; (UT) T-81, Primary System Makeup Storage Tank, One-Time Inspection of Internals; October 8, 2010

WO 00139916; (VT) T-72, Pressurizer Spray Valve Nozzle, On-Time Inspection (OTI) for Renewed License;

WO 00208354; (VT) N-54B; Inspect Coatings in All Areas of Containment; October 7, 2010

WO 00203163; (VT) PCV-1448, Oil Control Valve, NCC One-Time Inspection (OTI) for Renewed License; October 18, 2010

WO 00204074; (VT) of Stainless Steel Piping, M-980 (EHC Reservoir), October 18, 2010

WO 00214407; EA-14 Safeguard Bus Clean and Inspect, October 19, 2010

WO 211365; Primary Coolant Pumps P-50C and D Bolted connection Examination, October 5, 2010

WO 51657522; Periodic Testing of Sensitive Instrumentation Circuits for License Renewal, October 19, 2010

WO 198409; Tan Delta and Withstand Testing of Feeder Cable to Switchgear Bus 1C, October 20, 2010

Examination Records

Visual Examination Record; MV-CA10431; June 7, 2010

Visual Examination Record; F-1018; June 7, 2010

PLP-RPT-10-00053; 1R21 Refueling Outage Safety Related Containment Coatings Assessment Report; Revision 0

10-MAO-45; Visual Examination of T-72 Spray Valve Nozzle; October 8, 2010

10-MAO-47; Visual Examination of PCV-1448; October 18, 2010

10-MAO-48; Visual Examination of M-980; October 18, 2010

BOP-UT-10-001; T-81 Tank Bottom Thickness Measurements; October 7, 2010

Procedures

CEP-NDE-0112; Certification of Visual Examination Personnel, Revision 7

CEP-NDE-0901; VT-1 Visual Examination (ASME XI), Revision 4

EM-09-14; VT-2 Examinations, Revision 7

CEP-NDE-0505; Ultrasonic Thickness Examination, Revision 4

EM-32-05; Palisades Nuclear Plant Engineering Manual Procedure, Revision 1

CLP-M-7; Containment Coating Condition Assessment, Revision 2

EM-09-22; Nickel-Alloy Program, Revision 0

WI-MSE-E-17; VLF Tan Delta and Withstand Testing of Electrical Power Cables, Revision 0

EM-09-24; Service Water and Fire Protection Inspection Program, Revision 1

MSE-E-52; Periodic Testing of Sensitive Instrumentation Circuits in Scope of License Renewal, Revision 1

RT-71A; Primary Coolant System, Class 1 System Leakage Test, Revision 13

EM-09-03; In-service Inspection, Revision 17

EN-LI-110-ATT-9.4; Commitment Change Evaluation Form, Revision 2

Completed Work Orders Reviewed

WO 00203716; CK-HED400, One-Time Inspection (OTI) for Renewed Licensee; August 12, 2010

WO 51636876; MV-HED680, Perform One-Time Inspection of Removed Piping/VLV; April 10, 2009

WO 51603754; MV-SW504, Perform One-Time Inspection of Old Valve; April 6, 2009

WO 51671762; F-13B, Seal Water Supply Strainer PM; February 3, 2009

WO 00158457; F-973A, EHC Polishing Filter, One-Time Inspections; November 17, 2008

WO 001762391; MV-VA531, Replace VC-10 Liquid Line Shutoff Valve; April 20, 2010

WO 00210840; V-27C, RTF – One-Time Inspection (OTI) Renewed License; February 20, 2010

WO 203036-03; UT Examination of SW Pipe Section from Containment Cooler VHX-2, October 8, 2010

WO 194850-06-10C; UT Examination of Components PCS-3-PSS-2A1-4 and 5, October 11, 2010

WO 52278477-01; Inspection and Pump out of Manholes, September 20, 2010

WO 00231681; UT Examination of Weld ID PCS-3-PSS-2A1-3, October 11, 2010

WO 00214848; UT Examination of Weld ID ESS-2.5-SIS-1B1-16, October 16, 2010

WO 00214851; UT Examination of Weld ID ESS-2.5-SIS-2A1-16, October 16, 2010

Condition Reports Generated During the Inspection

CR-PLP-2010-04504; Enhanced Visual Exam Requirements; October 6, 2010

CR-PLP-2010-04516; Selective Leaching Hardness Testing; October 6, 2010

CR-PLP-2010-04653; UT Procedure Not Being Followed; October 8, 2010

CR-HQN-2010-01101; Fleet Commitment Management Procedure Does Not Align with NEI 99-04, October 8, 2010

CR-PLP-2010-04451; Effectiveness of Boric Acid Inspection Procedure EN-DC-319, October 5, 2010

CR-PLP-2010-04836; VT Examination Records Contained Incorrect References, October 11, 2010

CR-PLP-2010-5275; Work Order Package for Pressurizer Spray Head Inspection Lacked Information, October 19, 2010

CR-PLP-2010-5282; Missed Procedure Action during VT-1 of PCV-1448, October 19, 2010

CR-PLP-2010-5283; Illumination not Verified at Inspection Location, October 19, 2010

CR-PLP-2010-5360; Trend CR-NRC Observed Weaknesses in WO Packages and NDE Procedure Compliance, October 20, 2010

CR-PLP-2010-5624; Character Card Calibrated Perpendicular to Boroscope, October 25, 2010

CR-PLP-2010-5632; Character Cards Certified by Lots Rather Than Individually, October 25, 2010

Condition Reports Reviewed

CR-PLP-2010-05150; One-Time Inspection of T-73 Quench Tank Findings; October 16, 2010

01002112; Fleet Modification Process does not Assure Structural Review, October 27, 2005

01002162; Standing Water in Power Cable Manholes in 1C Switchgear Room; October 27, 2005

01002169; Water Dripping from Sample Line Near MCC-3 Cable Tray on to Floor; October 27, 2005

Miscellaneous

EPRI Report 1012082; Materials Reliability Program: Inspection and Flaw Evaluation Strategies for Managing Aging Effects in PWR Internals (MRP-153); December 2005

EPRI Report 1019075; TR-105696-R12 (BWRVIP-03) Revision 12: BWR Vessel and Internals Project, Reactor Pressure Vessel and Internals Examination Guidelines; December 2009

Letter to NRC; Annual Update of the Application for Renewed Operating License for the Palisades Nuclear Plant; March 21, 2006

Letter to NRC; License Renewal Commitment to Submit Alloy 600 Program; March 13, 2008

VEV-M1-LA; Nozzle Details Pressurizer; Revision 8

VEN-M1-1A SH-995; Internal Details for Consumers Power Pressurizer; Revision 4

VEN-M1-L-A; Top Head Forming and Welding for Pressurizer; Revision 7

VEN-M1-L-A; Vessel Assembly and Final Machining Pressurizer; Revision 2

LR Action Items 05-115 through 123 Written as a Result of 71002 Inspection, November 2005.

LIST OF ACRONYMS USED

ADAMS	Agency wide Document Access Management System
AMP	Aging Management Program
CR	Condition Report
CFR	Code of Federal Regulations
EQ	Environmental Qualification
EHC	Electro-Hydraulic Control
FW	Feed Water
GALL	Generic Aging Lessons Learned
IMC	Inspection Manual Chapter
IR	Inspection Report
LR	License Renewal
LRA	License Renewal Application
NDE	Nondestructive Examination
NPS	Nominal Pipe Size
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
PCV	Pressure Control Valve
SDP	Significance Determination Process
SER	Safety Evaluation Report
SG	Steam Generator
SSC	Structures, Systems, Components
UT	Ultrasonic Thickness
VT	Visual Testing
WO	Work Order

C. Schwarz

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Sincerely,

/RA/

Ann Marie Stone, Chief
Engineering Branch 2
Division of Reactor Safety

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

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w/Attachment: Supplemental Information

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Letter to Mr. Christopher J. Schwarz from Ms. Ann Marie Stone dated December 3, 2010.

SUBJECT: PALISADES NUCLEAR PLANT NRC POST-APPROVAL SITE INSPECTION
FOR LICENSE RENEWAL, INSPECTION REPORT 05000255/2010010(DRS)

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