



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

October 20, 2010

EA-09-269

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 SUPPLEMENTAL (95001) INSPECTION  
REPORT 05000255/2010009**

Dear Mr. Schwarz:

On September 17, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed a supplemental inspection at your Palisades Nuclear Plant. The enclosed report documents the inspection results which were discussed on September 17, 2010, with Mr. Tom Kirwin and members of your staff.

The NRC performed this supplemental inspection consistent with the NRC Action Matrix due to a White performance issue in the Initiating Events Cornerstone. Specifically, on January 20, 2010, the NRC issued its Final Significance Determination and a Notice of Violation (NRC Inspection Report No. 05000255/2010007) for a White finding that involved failures by your staff to evaluate the effects of spent fuel pool rack swelling or to make use of available operating experience to validate the neutron absorber in the Spent Fuel Pool continuing to meet the assumptions in the criticality analysis. The NRC staff was informed on July 6, 2010, of your staff's readiness for this inspection.

This supplemental inspection utilized NRC Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," and was conducted to provide assurance that: (1) the root and contributing causes of the White performance issue were understood; (2) the extent of condition and extent of cause were identified; and (3) your corrective actions were sufficient to address the root causes and contributing causes and to prevent recurrence.

The inspection was an examination of activities conducted under your license as they relate to safety and to compliance with the Commission's Rules and Regulations and with the conditions of your license. Within these areas, the inspection focused on your staff's evaluation of the White performance issue and consisted of a selective review of procedures, documents and representative records, observation of activities, and interviews of personnel.

Your staff's evaluation identified that the root causes were that your personnel did not respond effectively to multiple indications of problems with Region I Spent Fuel Pool racks that adversely affected their ability to comply with the design feature requirements of Technical Specification 4.3, and that your staff did not recognize the non-conservative input assumptions in the criticality analysis of record and therefore did not plan for the contingencies of significant neutron absorber degradation and voiding. The inspectors determined that your root cause evaluation and associated self-assessment for the White finding were conducted using systematic techniques and adequately identified the root and contributory causes for the specific performance issue.

Corrective actions were developed to address the identified cause and contributors including strengthening the corrective action process and adding rigor to engineering calculations. We concluded that your corrective actions were adequate to address the causes that were identified in your evaluation so as to prevent recurrence. Therefore, consistent with NRC Manual Chapter 0305, "Operating Reactor Assessment Program," this issue is removed from consideration of future agency actions as four quarters have elapsed following our input of the original finding in the assessment program (the four quarters are considered complete at the end of the third quarter 2010). Palisades has transitioned to the licensee response band (Column I). The inspectors did have several observations regarding specific aspects of the root cause evaluation and corrective actions that were shared with your staff.

During the course of our inspection activities, the inspectors identified one NRC-identified finding of very low safety significance. The finding involved a violation of NRC requirements. The finding had a cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the corrective actions issued for the identified root causes failed to address the identified root causes. 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 a Non-Cited Violation in accordance with Section 2.3.2 of the NRC Enforcement Policy. If you contest the NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Palisades Nuclear Plant. In addition, if you disagree with the characterization of any 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. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

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/***

John B. Giessner, Chief  
Branch 4  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000255/2010009  
w/Attachments: Supplemental Information

cc w/encl: Distribution via ListServ

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION III**

Dockets: 50-255

Licenses No.: DPR-20

Reports No.: 05000255/2010009

Licensee: Entergy Nuclear Operations Company, Inc.

Facility: Palisades Nuclear Plant

Location: Covert, MI

Dates: September 13 through September 17, 2010

Inspectors: B. Bartlett, Senior Resident Inspector

Approved By: J. Giessner, Chief  
Branch 4  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

Inspection Report 05000255/2010009; 09/13/10 – 09/17/10; Palisades Nuclear Plant.  
Inspection Procedure (IP) 95001 Supplemental Inspection.

This report covers a supplemental inspection performed by a Senior Resident Inspector. One Green Non-Cited Violation (NCV) of Technical Specification 5.4.1, "Procedures," was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Cross-cutting aspects are determined using Inspection Manual Chapter 0305, "Operating Reactor Assessment Program." Findings for which the SDP does not apply may be Green or assigned a severity level after NRC management review. 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.

### Cornerstone: Initiating Events

The NRC performed this supplemental inspection in accordance with IP 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," to assess the licensee's evaluation associated with the degradation of the fixed neutron absorber in the Spent Fuel Pool (SFP). The NRC staff previously characterized this issue as having low to moderate safety-significance (White) as documented in NRC Inspection Report No. 05000225/2010007. During this supplemental inspection, the inspectors determined that the licensee performed an adequate evaluation of the specific performance issue and that comprehensive corrective actions addressed each of the root and contributing causes. The licensee identified two root causes in that plant staff did not respond effectively to multiple indications of problems with Region I SFP racks that adversely affected compliance with the design feature requirements of Technical Specification 4.3, and that plant staff did not recognize the non-conservative input assumptions in the criticality analysis of record and therefore did not plan for the contingencies of significant neutron absorber degradation and voiding. Additionally, five contributing causes were identified.

Corrective actions as documented in the root cause evaluation included:

- Strengthen the corrective action process to include formal written evaluations and corrective action closure reviews (part of the corrective action to the overall improvement of the corrective action program that was previously implemented).
- Implement more rigorous engineering calculation requirements.
- End the Technical Specification non-compliance by requesting, receiving, and implementing license amendment 236.
- Adding the spent fuel pool full core offload capability restoration to the Station Top Ten List.

Based on the licensee's progress in evaluating and correcting the issues associated with the degradation of the fixed neutron absorber in the SFP which resulted in the White finding, this initiating event cornerstone performance issue will not be held open beyond the normal four quarters provided in NRC Manual Chapter 0305, "Operating Reactor Assessment Program."

## Findings

Green. The inspectors identified a finding of very low safety significance with an associated Non-Cited Violation of Palisades Technical Specification 5.4.1, "Procedures." Specifically, the licensee's procedure for the performance of root cause analysis required the issuance of a Corrective Action to Prevent Recurrence (CAPR) to address each identified root cause and the licensee's only CAPR failed to address the root causes identified by the licensee. This issue was entered into the licensee's corrective action program as CR-PLP-2010-03976.

The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; specifically, the finding impacted the adequate corrective action to prevent recurrence of an event that impacted the Initiating Event Cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for the original White finding, the inspectors had evaluated the White finding using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the original finding was of low to moderate safety significance (White). This violation is of very low safety-significance because other corrective actions taken by the licensee in response to additional NRC findings have been adequate to prevent recurrence. Because this violation was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee's corrective action program the violation is being treated as an NCV, consistent with the NRC Enforcement Policy. The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the corrective actions issued for the identified root causes failed to address the identified root causes. Specifically, the licensee did not have a CAPR that addressed each of the identified root causes. (P.1(c)) (Section 02.03.a)

## REPORT DETAILS

### 01. Inspection Scope

The NRC staff performed this supplemental inspection in accordance with Inspection Procedure (IP) 95001 to assess the licensee's evaluation of a (White) finding which affected the occupational radiation safety cornerstone in the radiation safety strategic performance area. The inspection objectives were to:

- provide assurance that the root and contributing causes of risk-significant issues were understood;
- provide assurance that the extent of condition and extent of cause of risk-significant issues were identified; and
- provide assurance that the licensee's corrective actions for risk-significant issues were or will be sufficient to address the root and contributing causes to preclude repetition.

The NRC performed this supplemental inspection consistent with the NRC Action Matrix due to a White performance issue in the Initiating Events Cornerstone. Specifically, on January 20, 2010, the NRC issued its Final Significance Determination and a Notice of Violation (NRC Inspection Report 05000255/2010007) for a White finding that involved failures by plant staff to evaluate the effects of spent fuel pool rack swelling or to make use of available operating experience to validate the neutron absorber in the Spent Fuel Pool continued to meet the assumptions in the criticality analysis. The NRC staff was informed on July 6, 2010, of the licensee's readiness for this inspection.

The licensee performed a root cause evaluation (RCE), CR-PLP-2009-05938, Revision 0, to identify the direct and contributing causes, and also causal factors which allowed for the risk-significant finding, and to determine the organizational attributes that resulted in the White finding. The licensee also addressed safety culture in the RCE.

The inspectors reviewed the licensee's RCE, as well as other evaluations conducted in support and as a result of the RCE. The inspectors reviewed corrective actions that were taken or planned to address the identified causes. The inspectors also held discussions with licensee personnel to ensure that the root and contributing causes and the contribution of safety culture components were understood and corrective actions taken or planned were appropriate to address the causes and preclude repetition.

## 02. Evaluation of Inspection Requirements

### 02.01 Problem Identification

- a. Inspection Procedure 95001 requires that the inspection staff determine that the licensee's evaluation of the issue documents who identified the issue (i.e., licensee-identified, self-revealing, or NRC-identified) and the conditions under which the issue was identified.

This issue of the spent fuel pool (SFP) neutron absorber having degraded over a number of years to the extent that the SFP no longer met the requirements of the Design Feature for fuel storage in Technical Specification (TS) 4.3 was identified by NRC inspectors while performing follow up to licensee identified degraded conditions. While selected licensee Condition Reports (CRs) discussing the finding were issued with identification codes that indicated the items were NRC identified, there were no CRs (including the RCE CR) which stated in the write-ups that the finding was NRC identified. Discussions with the licensee determined that they agreed that the finding was appropriately characterized as NRC identified. The issue is now documented in several records within the licensee's corrective action program, including the licensee's RCE.

- b. Inspection Procedure 95001 requires that the inspection staff determine that the licensee's evaluation of the issue documents how long the issue existed and prior opportunities for identification.

As noted in the licensee's RCE and several NRC inspection reports the licensee missed numerous opportunities to self-identify the issue. A comprehensive review of the issue began after prompting by NRC inspectors, nonetheless there was a significant delay between the degradation of the SFP walls and the licensee's understanding of the true extent of condition. These items were adequately documented in the licensee's RCE.

- c. Inspection Procedure 95001 requires that the inspection staff determine that the licensee's evaluation documents the plant specific risk consequences, as applicable, and compliance concerns associated with the issue.

A plant specific probabilistic risk-assessment was not applicable to this issue. The licensee did perform a safety significance evaluation that was reviewed by the inspectors. The safety significance evaluation was adequately performed and documented.

#### Findings

No findings of significance were identified.

### 02.02 Root Cause, Extent of Condition, and Extent of Cause Evaluation

- a. Inspection Procedure 95001 requires that the inspection staff determine that the licensee evaluated the issue using a systematic methodology to identify the root and contributing causes.

The licensee conducted a root cause analysis of the performance issue. The licensee used Procedure EN-LI-118, "Root Cause Analysis Process," Revision 11, and other implementing procedures to evaluate these issues. These procedures included such analysis tools as Event and Causal Factor Charting, Change Analysis, Barrier Analysis, Causal Factor Trending, and Human Performance Error Reviews. The inspectors evaluated the root cause evaluation report against the requirements of the licensee's procedures and determined that the evaluations performed followed the administrative procedure requirements.

The inspectors concluded that systematic methods were used to identify the root cause and contributing cause.

- b. Inspection Procedure 95001 requires that the inspection staff determine that the licensee's RCE was conducted to a level of detail commensurate with the significance of the issue.

The inspectors concluded that the root cause evaluation had identified and assessed the potential contributors to the decrease in performance in sufficient detail to identify appropriate corrective actions. Although acceptable, the inspectors concluded that the root causes were narrowly focused.

#### Root Cause

The licensee identified two root causes in its evaluation:

1. "Palisades did not respond effectively to multiple indications of problems (condition reports, OE [Operating Experience] and physical evidence such as stuck bundles) with Region I SFP racks that adversely affected ability to comply with the design feature requirements of TS 4.3."
2. "Palisades did not recognize the non-conservative input assumptions in the criticality analysis of record (EA-SFP-97-02) and therefore did not plan for the contingencies of significant neutron absorber degradation and voiding."

Although the root causes as written were acceptable the inspectors determined through interviews with licensee personnel that they were narrowly interpreting them with a consequential effect upon the corrective actions. This is discussed in more detail in Section 02.03.a.

#### Contributing Causes

Additionally, five contributing causes were identified.

1. Palisades was influenced by coupon test results from other stations that may not have been representative of the Region I SFP.
2. Palisades criticality analyses between approximately 1991 and November 2008 did not consider rack panel swelling and moderator voiding, which had been mentioned in industry information (1981) and questioned by the NRC (2007).

3. Despite numerous recommendations and a corrective action, Palisades never systematically ensured venting of the Region I SFP boron enclosures.
4. Palisades believed SFP total organic carbon (TOC) measurements indicated B-10 degradation that was less than it proved to be.
5. Palisades did not obtain the acceptance criteria for the 2007 Millstone 1 BADGER testing that indicated B<sub>4</sub>C areal densities possibly as low as 0.0463 g/cm<sup>2</sup>.

The inspectors determined the licensee's evaluations of extent of condition and extent of cause appropriately assessed extent of equipment and performance issues applicable to the individual and collective performance issues.

- c. Inspection Procedure 95001 requires that the inspection staff determine that the licensee's RCE included a consideration of prior occurrences of the issue and knowledge of operating experience (OE).

The RCE included a historical review of the licensee's corrective action and work control databases and did appropriately determine that prior occurrences and OE was a significant factor in the causes of the event.

The inspectors concluded that, in general, the licensee's root cause evaluation appropriately considered both internal and external operating experience. The evaluation assessed the licensee's previous lack of recognition, evaluation, and timely mitigation of radiological events.

- d. Inspection Procedure 95001 requires that the inspection staff determine that the licensee's RCE addresses the extent of condition and extent of cause of the issue(s).

The licensee's evaluations considered the potential for common cause and extent of condition for each of the identified root causes.

The inspectors determined the licensee's evaluations of the extent of condition and extent of cause appropriately assessed the extent of equipment and performance issues applicable to the individual and collective performance issues. In addition, licensee staff members appropriately considered the extent of the issues for each root cause and contributing cause and conducted a broad common cause review that appropriately considered the extent of condition and the extent of the causes.

- e. Inspection Procedure 95001 requires that the inspection staff determine that the licensee's root cause, extent of condition, and extent of cause evaluations appropriately considered the safety culture components as described in IMC 0305.

The inspectors concluded that the current safety culture aspect associated with this issue was appropriately considered in the licensee's RCE and included consideration of whether a weakness in any safety culture component was a root cause or a significant contributing cause of the issue. Of the thirteen Safety Culture Components the licensee determined that Decision Making, Corrective Action Program, Operating Experience, Self and Independent Assessments and Accountability had relevance to the root causes. These components applied to both the root causes and the contributing causes. The inspectors verified that the corrective actions initiated by the

licensee addressed the safety culture components that were determined to be applicable. For example, the corrective actions to strengthen the corrective action process to include formal written evaluations and the corrective action to implement more rigorous engineering calculation requirements would address the decision making component as well as other deficient components.

#### Findings

No findings of significance were identified.

### 02.03 Corrective Actions

- a. Inspection Procedure 95001 requires that the inspection staff determines that: (1) the licensee specified appropriate corrective actions for each root and/or contributing cause; or (2) an evaluation that states no actions are necessary is adequate.

Corrective actions were developed to address the identified causes and the contributors so as to prevent recurrence of the performance issue. Corrective actions as documented in the root cause evaluation included:

- Obtaining and implementing License Amendment 236 which ended the licensee's non-compliance with TS 4.3 (this was the licensee's only Corrective Action to Prevent Recurrence (CAPR)).
- Strengthen the corrective action process to include formal written evaluations and corrective action closure reviews (this item had already been implemented as part of the licensee's general improvement of the Corrective Action Program which had started in 2007).
- Implement a more rigorous engineering calculation requirement in the engineering change process, engineering calculation process, design verification and design input process (already in progress as part of corrective actions to earlier engineering issues).
- Perform another re-rack of Region I of the SFP. This corrective action was limited to obtaining funding approval only and would be closed upon funding.
- Implement a Reactivity Management Oversight Group (RMOG) to formally review open and closed CR evaluations and corrective action (CA) closures related to spent fuel storage issues and reactivity management issues. The RMOG would assess CRs and CAs issued after the formation of the group but not those that had previously been issued.

#### Findings

Introduction: The inspectors identified a finding of very low safety significance with an associated Non-Cited Violation of Palisades TS 5.4.1, "Procedures." Specifically, the licensee's procedure for the performance of root cause analysis required the issuance of a CAPR to address each identified root cause and the licensee's only CAPR failed to address the root causes identified by the licensee.

Description: Overall the inspectors determined that the corrective actions taken were appropriate for the associated causes; however, the inspectors did identify a finding for the licensee failing to follow their corrective action program procedure. Due to the narrow interpretation of the root cause the licensee's only CAPR was narrowly focused and only restored compliance with TS. Broader scope corrective actions intended to prevent recurrence were included as part of the licensee's RCE but were being treated as CAs and not CAPRs as required by the corrective action program. The licensee's procedures required an Effectiveness Review for CAPRs but did not require one for those items labeled as CAs. Interviews with the licensee personnel who performed the RCE determined that they had assessed the root cause as more narrowly focused than was documented in the final report. Licensee personnel had also captured additional corrective actions that would have the effect of preventing recurrence of the White Finding.

Analysis: The inspectors determined that the licensee's failure to have a CAPR that addressed the root causes was a performance deficiency warranting further evaluation with the SDP. The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; specifically, the finding impacted the adequate CAPR of an event that impacted the Initiating Event Cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for the original White finding, the inspectors had evaluated the White finding using Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the original finding was of low to moderate safety significance (White). This violation is of very low safety-significance because other corrective actions taken by the licensee in response to NRC findings have been adequate to prevent recurrence thus far.

The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the corrective actions issued for the identified root causes failed to address the identified root causes. Specifically, the licensee did not have a CAPR that addressed each of the identified root causes. [P.1(c)].

Enforcement: Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained covering site programs implementation and the procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A. Regulatory Guide 1.33 states, in part, that the corrective action program will be performed in accordance with written procedures appropriate to the circumstances. Procedure EN-LI-118-01, Revision 0, "Event and Causal Factor Charting," requires a CAPR for all root causes. Contrary to TS 5.4.1 during an inspection on September 16, 2010, the NRC inspectors determined that the only CAPR in the licensee's SFP neutron absorber degradation root cause evaluation report dated, February 3, 2010, did not address either of the licensee's identified root causes.

Because this violation was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee's corrective action program the violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. (NCV 05000255/2010009-01, Corrective Action to Prevent Recurrence Failed to Address Root Causes). This issue was entered into the licensee's corrective action program as CR-PLP-2010-03976.

- b. Inspection Procedure 95001 requires that the inspection staff determine that the licensee prioritized corrective actions with consideration of risk significance and regulatory compliance.

The licensee performed prompt corrective actions by ensuring the SFP remained in a safe condition. Intermediate corrective actions were performed in order to restore compliance with plant TSs. The inspectors considered the prioritization of the remaining corrective actions to be appropriate.

- c. Inspection Procedure 95001 requires that the inspection staff determine that the licensee established a schedule for implementing and completing the corrective actions.

The licensee established adequate schedules for the completion of the specified corrective actions. The majority of the corrective actions had been completed prior to this inspection, and the remaining corrective actions were on schedule for completion. The inspectors reviewed the completed corrective actions and concluded that they had been generally implemented in a timely and effective manner. The inspectors did not identify any concerns with the scheduling or completion of corrective actions.

- d. Inspection Procedure 95001 requires that the inspection staff determine that the licensee developed quantitative and/or qualitative measures of success for determining the effectiveness of the corrective actions to preclude repetition.

As noted above the only CAPR developed by the licensee failed to address the identified root causes. This led to the licensee's only officially required effectiveness review to also be narrowly focused. Additional review by the inspectors determined that the licensee had scheduled an effectiveness review of the broader scope corrective actions and of the overall RCE. The licensee agreed to re-evaluate the comprehensiveness of the effectiveness review as part of the corrective actions to prevent recurrence developed under new CR-PLP-2010-03976, the re-evaluation was also required by the corrective action program.

- e. Inspection Procedure 95001 requires that the inspection staff determine that the licensee's planned or taken corrective actions adequately address a Notice of Violation (NOV) that was the basis for the supplemental inspection, if applicable.

The inspectors reviewed information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and determined that full compliance has been achieved.

03 OTHER ISSUES

03.02 (Closed) Violation 05000255/2009008-01, Loss of Spent Fuel Pool Neutron Absorption Capability

The inspectors reviewed the corrective actions to address the violation as documented in this report. This violation is closed.

04 MANAGEMENT MEETINGS

Regulatory Performance Meeting Summary

On September 17, 2010, the inspectors presented the inspection results to Mr. T. Kirwin, Plant General Manager, and other members of the staff who acknowledged the results of the inspection and the violation of applicable regulatory requirements. Mr. G. Shear, Deputy Director of the Division of Reactor Projects in Region III and Mr. R. Orlikowski, Acting Branch Chief, Reactor Projects Branch 4, Region III, conducted a Regulatory Performance Meeting by phone during the exit. The inspectors confirmed that proprietary information was not provided or examined during this inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee

T. Kirwin, Plant General Manager  
D. Hamilton, Director NSA  
A. Blind, Engineering Director  
D. Corbin, Assistant Operations Manager  
J. Borah, System Engineering Manager  
J. Miksa, Programs Engineering Manager  
R. Prescott, CA&A Specialist  
B. Baker, Maintenance Manager  
P. Anderson, Licensing Manager  
C. Sherman, Radiation Protection Manager  
C. Plachta, Quality Assurance Manager  
R. Schmidt, Reactor Engineering Supervisor  
T. Woody, Reactor Engineer  
J. Kuemin, Licensing Senior Engineer  
R. Heimsath, Licensing Senior Specialist  
F. Smith, Fuel and Analysis Manager  
D. Cooley, Consultant  
T. Wiggins, Reactor Engineering

#### NRC

J. Ellegood, Senior Resident Inspector  
T. Taylor, Resident Inspector

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

#### Opened and Discussed

050000255/2010009-01	NCV	Corrective Action to Prevent Recurrence Failed to Address Root Causes
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#### Closed

050000255/2010009-01	NCV	Corrective Action to Prevent Recurrence Failed to Address Root Causes
05000255/2009008-01	VIO	Loss of Spent Fuel Pool Neutron Absorption Capability

## LIST OF DOCUMENTS REVIEWED

### Procedures

EN-LI-118; Root Cause Analysis Process, Revision 11  
EN-LI-102; Corrective Action Process, Revision 15  
EN-LI-104; Self-Assessments and Benchmarking, Revision 6  
EN-DC-159; System Monitoring Program, Revision 3  
EN-DC-143; System and Component Health Reports, Revision 10  
EN-DC-143-01; System Health Report Supplemental Guidance, Revision 1  
EN-DC-115; Engineering Change Process, Revision 10  
EN-DC-141; Design Inputs, Revision 7  
EN-DC-134; Design Verification, Revision 3  
EN-DC-126; Engineering Calculation Process, Revision 3

### Evaluations

CR-PLP-2009-00937; Identification of ineffective security corrective action process, March 1, 2009  
CR-PLP-2009-05938; Perform Level A Root Cause Analysis for White Finding, December 30, 2009  
LO-PLPLO-2010-0008; Perform a Focused Self-Assessment for readiness for 95001; May 21, 2010  
CR-PLP-2008-03067; Badger testing results indicate degraded areal density, July 15, 2008

### NRC Identified CRs

CR-PLP-2010-03976; CAPR will not prevent recurrence of CR-PLP-2009-05938, September 17, 2010  
CR-PLP-2010-03968; Aggregate assessment not performed by reactor engineering, September 16, 2010  
CR-PLP-2010-03958; Corrective action stated did not match corrective action performed, September 16, 2010

### Miscellaneous

Pressurizer Pressure and Level Control System Summary First Half 2010, Revision 1  
Training Evaluation and Action Requests TEAR-PLP-2010-283, March 31, 2010  
TEAR-PLP-2010-284, March 31, 2010  
PMRQ 00025305, H-7, Clean and Inspect Vent Holes in NUS Racks  
Top Ten Equipment Reliability Issues, February 8, 2010  
Reactivity Management Oversight Group Charter, Revision 1  
Reactivity Management Oversight Group Meeting Minutes, April 14, 2010  
Reactivity Management Oversight Group Meeting Minutes September 2009  
Reactivity Management Oversight Group Meeting Minutes March 9, 2009  
Work Order 50081179, Task 26, Receive New Fuel, Install blocking devices if necessary  
Trip Report – 2009 Neutron Absorber User's Group Meeting, September 1, 2009

Engineering Report PLP-RPT-00047, Revision 0, Palisades Stuck Bundle in Rack – Bundle Damage Assessment

E-Mail from Richard Schmidt to Brian Kemp dated August 6, 2010, subject documenting a focused Crew Assessment performed the week of August 2, 2010

Focused Crew Assessment (FCA) Balance of Plant Systems and Electrical/Instrument and Controls System

FCA NSSS Section

Senior Assessment Review Board Minutes, May 25, 2010

Training Review Group Meeting Agenda, June 14, 2010

Licensee Event Report 08-004; Noncompliance with TS 4.3.1.1.b, dated September 15, 2008

License Amendment 236, Spent fuel Pool Region 1 Criticality, dated February 6, 2009

License Amendment Request Spent fuel Pool Region 1 Criticality, dated November 5 and November 25, 2008

NET-299-01: BADGER Test Campaign at Palisades Nuclear Plant, October 8, 2008

ANP-2858-001; Palisades SFP Region 1 Criticality Evaluation with Burnup Credit

## LIST OF ACRONYMS USED

CAPR	Corrective Action to Prevent Recurrence
CA	Corrective Action
CFR	Code of Federal Regulations
CR	Condition Report
DRP	Division of Reactor Projects
EA	Enforcement Action
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NCV	Non-Cited Violation
NOV	Notice of Violation
NRC	Nuclear Regulatory Commission
OE	Operating Experience
RCE	Root Cause Evaluation
RMOG	Reactivity Management Oversight Group
SDP	Significance Determination Process
SFP	Spent Fuel Pool
SL	Severity Level
TOC	Total Organic Carbon
TS	Technical Specification
VIO	Violation
WO	Work Order

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/**

John B. Giessner, Chief  
Branch 4  
Division of Reactor Projects

Docket Nos. 50-255  
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Letter to C. Schwarz from J. Giessner dated October 20, 2010.

SUBJECT: PALISADES NUCLEAR PLANT NRC SUPPLEMENTAL (95001) INSPECTION  
REPORT 05000255/2010009

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