



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352  
January 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: FINAL SIGNIFICANCE DETERMINATION FOR A WHITE FINDING;  
NOTIFICATION OF FOLLOW-UP ASSESSMENT; AND NOTICE OF  
VIOLATION; NRC INSPECTION REPORT NO. 05000255/2010007;  
PALISADES NUCLEAR PLANT**

Dear Mr. Schwarz:

The purpose of this letter is to provide you the final results of our significance determination of the preliminary White finding identified in Inspection Report 05000255/2009008. The finding is associated with the failure to meet the requirements of Section 4.3 of the Technical Specifications for fuel storage in the spent fuel pool which resulted in the neutron absorber in the Region I spent fuel pool racks being degraded such that the effective neutron multiplication factor (Keff) would not remain at or below 0.95 without credit for soluble boron.

In a telephone message and follow-up conversation with Mr. John Giessner, Chief, Projects Branch 4, Region III, of the U.S. Nuclear Regulatory Commission (NRC), on December 21 and 28, 2009, Mr. David Hamilton of your staff indicated that Entergy declined the opportunity to discuss this issue in a Regulatory Conference or to provide a written response.

After considering the information developed during the inspection, the NRC has concluded that the inspection finding is appropriately characterized as White, a finding with low to moderate safety significance that may require additional NRC inspections.

You have 30 calendar days from the date of this letter to appeal the staff's determination of significance for the identified White finding. Such appeals will be considered to have merit only if they meet the criteria given in the NRC Inspection Manual Chapter 0609, Attachment 2.

The NRC has also determined that the finding had an associated violation, as cited in the enclosed Notice of Violation (Notice). The circumstances surrounding the violation were described in detail in the subject inspection report. In accordance with the NRC Enforcement Policy, the Notice is considered escalated enforcement action because it is associated with a White finding.

The NRC has concluded that the information regarding the reason for the violation, the corrective actions taken, and the date when full compliance was achieved is already adequately addressed on the docket in the subject inspection report. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position.

As a result of our review of Palisades Nuclear Plant's performance, including this White finding, we have assessed you to be in the Regulatory Response column of the NRC's Action Matrix. Therefore, we plan to conduct a supplemental inspection using Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," when your staff has notified us of your readiness for this inspection. This inspection procedure is conducted to provide assurance that the root cause and contributing causes of risk significant performance issues are understood, the extent of condition is identified, and the corrective actions are sufficient to prevent recurrence.

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction.

Sincerely,

***/RA by Cynthia D. Pederson Acting for/***

Mark A. Satorius  
Regional Administrator

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

Enclosure:  
Notice of Violation

cc w/encl: Distribution via Listserv

Letter to Christopher J. Schwarz from Mark A. Satorius dated January 20, 2010

SUBJECT: FINAL SIGNIFICANCE DETERMINATION FOR A WHITE FINDING;  
NOTIFICATION OF FOLLOW-UP ASSESSMENT; AND NOTICE OF  
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## NOTICE OF VIOLATION

Entergy Nuclear Operations, Inc.  
Palisades Nuclear Plant

Docket No. 50-255  
License No. DPR-20  
EA-09-269

During a U.S. Nuclear Regulatory Commission (NRC) inspection completed on November 9, 2009, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Technical Specification (TS) 4.3.1, Amendment 189, required, in part that Region I fuel storage racks be designed and maintained with a  $K_{\text{eff}} \leq 0.95$ , if fully flooded with unborated water, which includes allowances for uncertainties as described in Section 9.11 of the Updated Final Safety Analysis Report.

Contrary to the above, from July 2008 to February 6, 2009, the licensee failed to maintain the Region I fuel storage racks with a  $K_{\text{eff}} \leq 0.95$  when fully flooded with unborated water. Specifically, the Region I fuel storage racks contained fixed poison in the form of boron carbide ( $B_4C$ ) plates which were less than required by the TS to ensure the design feature was met. The  $B_4C$  neutron absorption capability degraded to the point that  $K_{\text{eff}}$  in Region I was greater than 0.95 under the bounding conditions described in Section 9.11 of the Updated Final Safety Analysis Report.

This violation is associated with a White finding.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to be taken to correct the violation and to prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in Inspection Report 05000255/20090008; dated December 9, 2009. However, you are required to submit a written statement or explanation pursuant to Title 10 of the Code of Federal Regulations (10 CFR) 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation EA-09-269," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region III, and a copy to the NRC Resident Inspector at the Palisades facility, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 20<sup>th</sup> day of January 2010

ENCLOSURE

The NRC has concluded that the information regarding the reason for the violation, the corrective actions taken, and the date when full compliance was achieved is already adequately addressed on the docket in the subject inspection report. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position.

As a result of our review of Palisades Nuclear Plant's performance, including this White finding, we have assessed you to be in the Regulatory Response column of the NRC's Action Matrix. Therefore, we plan to conduct a supplemental inspection using Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," when your staff has notified us of your readiness for this inspection. This inspection procedure is conducted to provide assurance that the root cause and contributing causes of risk significant performance issues are understood, the extent of condition is identified, and the corrective actions are sufficient to prevent recurrence.

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Sincerely,  
**/RA by Cynthia D. Pederson Acting for/**

Mark A. Satorius  
 Regional Administrator

Docket No. 50-255  
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cc w/encl: Distribution via Listserv

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OFFICE	RIII	RIII	RIII	D:OE	RIII	RIII
NAME	Lougheed	Giessner	West	Gulla for Zimmerman <sup>1</sup>	Orth	Pederson for Satorius
DATE	01/14/10	01/14/10	01/15/10	01/11/10	01/19/10	01/20/10

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1. OE concurrence received via e-mail from G. Gulla on January 11, 2010.