



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

March 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: END-OF-CYCLE ASSESSMENT LETTER FOR PALISADES NUCLEAR PLANT
(REPORT 05000255/2012001)**

Dear Mr. Vitale:

On February 13, 2013, the NRC completed its end-of-cycle performance review of the Palisades Nuclear Plant. The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from January 1, 2012, through December 31, 2012. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility.

The NRC determined that overall, Palisades Nuclear Plant operated in a manner that preserved public health and safety and met all cornerstone objectives. The NRC determined that performance at the Palisades Nuclear Plant during the most recent quarter was within the Licensee Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix because all inspection findings had very low (i.e., green) safety significance, and all PIs indicated that your performance was within the nominal, expected range (i.e., green). Therefore, the NRC plans to conduct ROP baseline inspections at your facility. Additionally, as stated in our Assessment Follow-up Letter dated November 9, 2012 (ML12314A304), the NRC is deviating from the ROP to conduct additional inspections, above baseline, during 2013, to: (1) follow-up on corrective actions regarding performance improvement efforts that had not been implemented when the Inspection Procedure (IP) 95002, "Inspection for One Degraded Cornerstone or Any Three White Performance Inputs in a Strategic Performance Area," inspection concluded, as well as assessing the corrective actions' sustainability; and (2) review a number of technical issues to verify that you determined the causes and implemented corrective actions to provide reasonable assurance that more significant safety concerns do not develop. Specifics on the reasons behind this deviation were provided in an ROP Deviation Memorandum to R. W. Borchardt, Executive Director of Operations, dated November 8, 2012 (ML12306A367).

During this assessment period the NRC closed three Greater-than-Green findings. These findings included a Yellow finding and one White finding in the Initiating Events Cornerstone, which resulted in plant performance for the first, second, and third quarters of 2012 to be in the Degraded Cornerstone Column of the NRC's ROP Action Matrix. The Yellow finding was associated with the loss of one direct current (DC) bus that occurred on September 25, 2011, which resulted in a complicated reactor trip. The White finding was associated with the failure of service water pump 'P-7C' due to intergranular stress corrosion cracking that occurred on a

pump shaft coupling on August 9, 2011. Additionally, a White finding was identified in the Mitigating Systems Cornerstone related to the Turbine Driven Auxiliary Feedwater pump's failure to run during a surveillance test on May 10, 2011.

The NRC completed a supplemental inspection using IP 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," on June 29, 2012 (ML12213A225). The NRC determined that your staff performed an acceptable evaluation of the White finding in the Mitigating Systems Cornerstone. Therefore, this White finding was closed at the end of the third quarter of 2012. In addition, the NRC completed a supplemental inspection using IP 95002, "Inspection for One Degraded Cornerstone or Any Three White Performance Inputs in a Strategic Performance Area," for the two findings in the Initiating Event Cornerstone (ML12314A304). The NRC determined that your actions met the inspection objectives with no significant weaknesses. As a result, the NRC determined the performance at Palisades Nuclear Plant to be in the Licensee Response Column of the Reactor Oversight Process Action Matrix as of October 1, 2012.

During this assessment period there were seven findings identified in the area of human performance (HP). In our mid-cycle performance letter dated September 4, 2012 (ML12248A318), we advised you of two substantive cross-cutting issues (SCCIs) in the area of HP with cross-cutting themes in the aspects of Conservative Assumptions (H.1(b)), and Oversight (H.4(c)). In addition, we advised you that the HP substantive cross-cutting issues would remain open until the number of findings in the H.1(b), and H.4(c) aspects were reduced and you demonstrated the implementation of effective corrective actions that resulted in sustained performance improvement in the HP area. The two SCCI's have been open for two consecutive assessment periods.

With regards to Conservative Assumptions (H.1(b)), there were only two findings in this HP aspect during the current assessment cycle, a reduction in number as it relates to our last assessment. Through our observations during supplemental and baseline inspections, we determined that your corrective actions have been effective in addressing this issue, and sustained performance improvement has been demonstrated. We noted that you have addressed the gaps in training and performance which kept the Conservative Assumptions issue open during the last assessment period. Based on these observations and our inspections, the SCCI in Conservative Assumptions (H.1(b)) is closed.

For the SCCI in Oversight (H.4(c)) there were three findings in this HP aspect during the current assessment cycle, a reduction in number as it relates to our last assessment. The effectiveness review, conducted by your staff, of corrective actions for addressing the SCCI in Oversight from the mid-cycle assessment revealed that those corrective actions to prevent recurrence (CAPRs) were not effective and did not drive the desired behavior changes. Through observations during supplemental and baseline inspections, the inspectors came to the same conclusion that the desired changes have not transpired with those corrective actions in place. The inspectors noted that issues are still being encountered in the area of oversight and new corrective actions have recently been assigned to resolve the gaps in performance found during your

effectiveness review. These actions have not yet been implemented and the sustainability of these actions will need to be reviewed when a reasonable duration of time has passed. For this reason, the SCCI in Oversight (H.4(c)) will remain open. This SCCI will remain open until the number of findings in the H.4(c) aspect is reduced and you demonstrate the implementation of effective corrective actions that result in sustained performance improvement in this area. You should plan on discussing your corrective actions to address this issue at the public end-of-cycle meeting.

The enclosed inspection plan lists the inspections scheduled through December 31, 2014. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last 12 months of the inspection plan are tentative and may be revised at the mid-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. This inspection plan does not include security related inspections, which will be sent via separate, non-publicly available correspondence.

In addition to the ROP baseline, we plan to perform Temporary Instruction (TI) 2515/182, "Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping". Additional inspections include: Inspection Procedure (IP) 92702 "Follow-up on Corrective Actions for Violations and Deviations," IP 92709 "Licensee Strike Contingency Plans," IP 60856.1 "Review of 10 CFR 72.212 (b) Evaluation at Operating Plants," IP 60854.1 "Operation of an Independent Spent Fuel Storage Installation at Operating Plants," IP 60855.1 "Preoperational Testing of Independent Spent Fuel Storage Facility Installation at Operating Plants," and IP 92703 "Follow-up on Confirmatory Action Letters or Orders from Alternative Dispute Resolution."

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

Please contact Mr. John Giessner at 630-829-9619 with any questions you have regarding this letter.

Sincerely,

/RA/

Charles A. Casto,
Regional Administrator

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

Enclosure: Palisades Nuclear Plant Inspection/Activity Plan

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DATE	02/20/13	02/20/13	02/25/13	02/28/13

Letter to A. Vitale from C. Casto dated March 4, 2013.

SUBJECT: END-OF-CYCLE ASSESSMENT LETTER FOR PALISADES NUCLEAR PLANT
(REPORT 05000255/2012001)

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Palisades
Inspection / Activity Plan
03/01/2013 - 12/31/2014

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			OL EXAM - INITIAL (RETAKE) EXAM FOR FEBRUARY 2013		1
1	02/25/2013	03/01/2013	W90302	OL - RETAKE EXAM - 2013 FEB - PALISADES	
			STRIKE - STRIKE CONTINGENCY		3
1	06/03/2013	06/28/2013	IP 92709	Licensee Strike Contingency Plans	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	07/08/2013	07/12/2013	IP 71124.07	Radiological Environmental Monitoring Program	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	07/15/2013	07/19/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	07/15/2013	07/19/2013	IP 71124.04	Occupational Dose Assessment	
1	07/15/2013	07/19/2013	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
1	07/15/2013	07/19/2013	IP 71151-BI01	Reactor Coolant System Activity	
1	07/15/2013	07/19/2013	IP 71151-OR01	Occupational Exposure Control Effectiveness	
1	07/15/2013	07/19/2013	IP 71151-PR01	RETS/ODCM Radiological Effluent	
			BI EPR - EP ROUTINE INSPECTION / PI VERIFICATION		2
1	09/09/2013	09/13/2013	IP 7111402	Alert and Notification System Testing	
1	09/09/2013	09/13/2013	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1	09/09/2013	09/13/2013	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1	09/09/2013	09/13/2013	IP 71151	Performance Indicator Verification	
			TI 182 - TI 182 BURIED PIPING PHASE 2		2
1	09/09/2013	09/13/2013	IP 2515/182	Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	10/07/2013	10/11/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	10/07/2013	10/11/2013	IP 71124.02	Occupational ALARA Planning and Controls	
			BI ISI - ISI BASELINE INSPECTION		1
1	10/07/2013	11/01/2013	IP 7111108P	Inservice Inspection Activities - PWR	
			CAL - FOLLOW-UP ON SIRWT CAL		2
1	10/07/2013	11/08/2013	IP 92703	Followup of Confirmatory Action Letters	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	12/02/2013	12/06/2013	IP 71124.05	Radiation Monitoring Instrumentation	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	01/06/2014	01/10/2014	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	01/06/2014	01/10/2014	IP 71124.04	Occupational Dose Assessment	

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

Palisades
Inspection / Activity Plan
03/01/2013 - 12/31/2014

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			PI&R - BIENNIAL PI&R		5
1	02/24/2014	03/14/2014	IP 71152B	Problem Identification and Resolution	
			BI OLRQ - BIENNIAL REQUAL PROGRAM INSPECTION		2
1	01/27/2014	01/31/2014	IP 7111111B	Licensed Operator Requalification Program	
			ISFSI - ISFSI INSPECTION - SCHEDULE DEPENDENT		1
1	03/01/2014	07/31/2014	IP 60856.1	Review of 10 CFR 72.212(b) Evaluations at Operating Plants	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	04/14/2014	04/18/2014	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	07/07/2014	07/11/2014	IP 71124.05	Radiation Monitoring Instrumentation	
			OL PREP - INITIAL EXAM - 09/2014		2
1	08/18/2014	08/22/2014	W90308	OL - INITIAL EXAM - 2014 JUN-FEB - PALI	
			OL EXAM - INIT EXAM FOR 09/2014		2
1	09/08/2014	09/19/2014	W90308	OL - INITIAL EXAM - 2014 JUN-FEB - PALI	
			BI ENG - COMPONENT DESIGN BASIS INSPECTION		6
1	09/08/2014	10/10/2014	IP 7111121	Component Design Bases Inspection	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	10/06/2014	10/10/2014	IP 71124.02	Occupational ALARA Planning and Controls	
1	10/06/2014	10/10/2014	IP 71151-BI01	Reactor Coolant System Activity	
1	10/06/2014	10/10/2014	IP 71151-OR01	Occupational Exposure Control Effectiveness	
1	10/06/2014	10/10/2014	IP 71151-PR01	RETS/ODCM Radiological Effluent	
			ISFSI - ISFSI INSPECTION - SCHEDULE DEPENDENT		1
1	10/01/2014	10/30/2014	IP 60854.1	Preoperational Testing of Independent Spent Fuel Storage Facility Installation at Operating Plants	
			BI EPX - EP EXERCISE INSPECTION / PI VERIFICATION		2
1	10/27/2014	10/31/2014	IP 71151	Performance Indicator Verification	
			ISFSI - ISFSI INSPECTION - SCHEDULE DEPENDENT		1
1	11/01/2014	11/30/2014	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	

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