



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

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

September 4, 2012

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

**SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR PALISADES NUCLEAR PLANT**

Dear Mr. Vitale:

On August 7, 2012, the NRC completed its mid-cycle performance review of the Palisades Nuclear Plant. The NRC reviewed the most recent quarterly performance indicators in addition to inspection results and enforcement actions from July 1, 2011, through June 30, 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. This assessment reflects the integration of the Security Cornerstone into the assessment program.

The NRC determined that performance at the Palisades Nuclear Plant during the most recent quarter was within the Degraded Cornerstone Column of the NRC's Reactor Oversight Process (ROP) Action Matrix due to one Yellow finding and one White finding in the Initiating Events Cornerstone. The Yellow finding was associated with the loss of one direct current 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. In addition, a White finding was identified in the Mitigating Systems Cornerstone related to the Turbine Driven Auxiliary Feedwater pump failure to run during a surveillance test on May 10, 2011. The failure was due to the actuation of the mechanical overspeed mechanism due, in part, to incorrect greasing of a piece of the mechanism (the knife edge). We completed a supplemental inspection using Inspection Procedure (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. Therefore, this White finding in the Mitigating Systems Cornerstone will be closed at the end of the third Quarter of 2012.

On July 17, 2012, your staff notified the NRC of your readiness for us to conduct a supplemental inspection to review the actions you have taken to address the performance issues which caused the degraded Initiating Events Cornerstone. Therefore, in addition to ROP baseline inspections, the NRC plans to conduct a supplemental inspection in accordance with IP 95002, beginning on September 17, 2012. The objectives of the supplemental IP are to provide assurance that the root and contributing causes of the performance issues are understood; to provide assurance that the extent of condition and the extent of cause are identified; to determine if safety culture components caused or significantly contributed to the individual and collective risk-significant performance issues; and, to provide assurance that corrective actions are sufficient to address the root and contributing causes and prevent recurrence.

During this assessment period there were 18 findings identified in the area of human performance (HP). In our end-of-cycle performance letter [ML12065A147] dated March 5, 2012, we advised you of three substantive cross-cutting issues (SCCIs) in the area of HP with cross-cutting themes in the components of Conservative Assumptions (H.1(b)), Documentation/Procedures (H.2(c)), 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), H.2(c) 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.

Regarding Conservative Assumptions, through our baseline inspection process and observations, we determined that the corrective actions taken to address the theme were closed before complete implementation. For example, an observation program to assess progress in addressing the theme was established, but never implemented. In addition, a corrective action to provide training was closed out without full staff participation. For this reason, the SCCI in Conservative Assumptions (H.1(b)) will remain open. Through our baseline inspection process, with respect to the aspect of Oversight, we determined that the corrective actions taken have not had enough implementation time to show sustained improvement and have not yet proven to be sufficient to mitigate the theme. This is evidenced by two additional findings with cross-cutting components in this aspect that have occurred in the last two quarters. For this reason, the SCCI in Oversight (H.4(c)) will remain open. These SCCIs will remain open until the number of findings in the H.1(b) and H.4(c) aspects are reduced and you demonstrate the implementation of effective corrective actions that result in sustained performance improvement in the HP area.

The SCCI in Documentation/Procedures (H.2(c)) was also opened during the last assessment period. There were only two findings in this HP component during the current assessment cycle, a reduction from last assessment. Through our observations and baseline inspection 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 upgraded many work orders prior to their use in the field, have implemented a training program for the procedure/work order writers, and have established a procedure upgrade program to improve the quality of procedures in the operations and maintenance departments. Also of note is that we have seen your staff stopping when they are unsure of the procedure or work order guidance. Based on these observations and our inspections, the SCCI in Documentation/Procedures (H.2(c)) is closed.

The enclosed inspection plan lists the inspections scheduled through December 31, 2012. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last 9 months of the inspection plan are tentative and may be revised at the end-of-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 and IP 95002 inspections, inspections are planned for Temporary Instruction (TI) 2515/182, "Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping"; TI 2515/187, "Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walk downs"; TI 2515/188, "Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walk downs"; Independent Spent Fuel Storage Installation (ISFSI) Inspection IP 60855.1, "Operation of an ISFSI at Operating Plants." In addition, we plan to perform Inspection IP 92702, "Follow-up on Corrective Actions for Violations and Deviations," 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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Letter to A. Vitale from C. Casto dated September 4, 2012.

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**Palisades**  
**Inspection / Activity Plan**  
**09/01/2012 - 12/31/2013**

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		<b>TI-187 - TI-187 FLOODING WALKDOWN</b>		<b>2</b>
07/01/2012	12/30/2012	IP 2515/187	Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns	
		<b>TI-188 - TI-188 SEISMIC WALKDOWN</b>		<b>2</b>
07/02/2012	12/31/2012	IP 2515/187	Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns	
		<b>95002 - 95002 SUPPLEMENTAL INSPECTION</b>		<b>8</b>
09/17/2012	09/28/2012	IP 95002	Supplemental Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Perfor	
		<b>OL PREP - PALISADES INIT PREP - OCTOBER 2012</b>		<b>3</b>
09/03/2012	09/07/2012	W90246	OL - INITIAL EXAM - 2012 OCT - PALI	
		<b>OL EXAM - PALISADES INIT EXAM - OCTOBER 2012</b>		<b>3</b>
10/01/2012	10/12/2012	W90246	OL - INITIAL EXAM - 2012 OCT - PALI	
		<b>BI FIRE - FIRE PROTECTION INSPECTION &amp; BAG TRIP</b>		<b>3</b>
10/08/2012	11/09/2012	IP 7111105T	Fire Protection [Triennial]	
		<b>INSP - 92702 FOLLOWUP OF ORDERS</b>		<b>2</b>
10/01/2012	12/31/2012	IP 2515/177	Managing Gas Accumulation In Emergency Core Cooling, Decay Heat Removal & Containment Spray System	
		<b>BI EPX - EP EXERCISE INSPECTION / PI VERIFICATION</b>		<b>2</b>
10/29/2012	11/02/2012	IP 7111401	Exercise Evaluation	
10/29/2012	11/02/2012	IP 71151	Performance Indicator Verification	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
11/05/2012	11/09/2012	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
11/05/2012	11/09/2012	IP 71124.02	Occupational ALARA Planning and Controls	
		<b>BI MODS - TRIENNIAL PERM MODS/50.59</b>		<b>3</b>
01/07/2013	01/25/2013	IP 7111117T	Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications	
		<b>ISFSI - ISFSI INSPECTION - SCHEDULE DEPENDENT</b>		<b>1</b>
01/02/2013	02/28/2013	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
		<b>TI-182 - TI-2515/182 PHASE I - BURIED PIPING</b>		<b>1</b>
12/10/2012	12/12/2012	IP 2515/182	Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
01/14/2013	01/18/2013	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
		<b>BI OLRQ - REQUALIFICATION PROGRAM INSPECTION</b>		<b>1</b>
01/22/2013	01/25/2013	IP 7111111A	Licensed Operator Requalification Program - Annual Review	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
04/01/2013	04/05/2013	IP 71124.05	Radiation Monitoring Instrumentation	

**Palisades**  
**Inspection / Activity Plan**  
**09/01/2012 - 12/31/2013**

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
07/15/2013	07/19/2013	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
07/15/2013	07/19/2013	IP 71151-BI01	Reactor Coolant System Activity	
07/15/2013	07/19/2013	IP 71151-OR01	Occupational Exposure Control Effectiveness	
07/15/2013	07/19/2013	IP 71151-PR01	RETS/ODCM Radiological Effluent	
		<b>BI EPR - EP ROUTINE INSPECTION / PI VERIFICATION</b>		<b>2</b>
09/09/2013	09/13/2013	IP 7111402	Alert and Notification System Testing	
09/09/2013	09/13/2013	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
09/09/2013	09/13/2013	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
09/09/2013	09/13/2013	IP 71151	Performance Indicator Verification	
		<b>TI 182 - TI 182 BURIED PIPING PHASE 2</b>		<b>2</b>
09/09/2013	09/13/2013	IP 2515/182	Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
10/07/2013	10/11/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
		<b>BI ISI - ISI BASELINE INSPECITON</b>		<b>1</b>
10/07/2013	11/01/2013	IP 7111108P	Inservice Inspection Activities - PWR	