



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

September 3, 2013

Mr. Ernest Harkness  
Site Vice President  
FirstEnergy Nuclear Operating Company  
Perry Nuclear Power Plant  
P. O. Box 97, 10 Center Road, A-PY-A290  
Perry, OH 44081-0097

**SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR PERRY NUCLEAR POWER PLANT  
(REPORT 0500440/2013006)**

Dear Mr. Harkness:

On August 13, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed its mid-cycle performance review of the Perry Nuclear Power Plant. The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from July 1, 2012, through June 30, 2013. 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 the performance at Perry during the most recent quarter, ending June 30, 2013, was within the Degraded Cornerstone Column (Column 3) of the NRC's Reactor Oversight Process (ROP) Action Matrix because of a low-to-moderate safety significance (i.e., White) held-open inspection finding and Notice of Violation (NOV), a Yellow Occupational Exposure Control Effectiveness PI, and a parallel White PI inspection finding, all of which affected the Occupational Radiation Safety Cornerstone.

Work management performance at Perry has remained steady over the assessment period with some challenges caused by human performance problems. During the refueling outage in March and April 2013, NRC inspectors identified human performance deficiencies, indicating that additional effort is needed to engrain expected behaviors when the organization is conducting infrequently performed tasks or schedule pressure exists. Of note were two valve mispositionings that resulted in NRC findings of very low safety significance (Green). The NRC also noted that your staff made a conservative decision to shut down the reactor when

leakage increased in the drywell after the refueling outage was completed. Several unexpected maintenance issues and equipment repairs arose during the shutdown and the performance of your staff in addressing those issues was considered good.

On August 12, 2013, the NRC issued 95002 Supplemental Inspection Report and Assessment Follow-up Letter (ML13224A382) that closed the held-open White inspection finding and NOV, and the parallel White PI inspection finding. Also, the Occupational Exposure Control Effectiveness PI returned from Yellow to Green in the second quarter of 2013. As a result, the NRC assessed the performance at Perry to be in the Licensee Response Column (Column 1) of the ROP Action Matrix as of August 12, 2013.

Our August 12, 2013 inspection report discusses that continued management attention and focus is needed to address lower level, less risk significant issues in the radiation protection area, radiological work coordination among all site departments, and continued emphasis that the issues in the radiation protection area are not restricted to the radiation protection department but apply to radiation workers in the other Perry departments. Included in these lower level issues that affect other departments are procedure use and adherence and procedure quality. In a letter dated January 17, 2013, a deviation from the ROP Action Matrix was approved by the Executive Director for Operations. Because of two White inspection findings in the occupational radiation safety area and one or more Greater-than-Green inspection findings in the security area, Perry met the criteria for a Repetitive Degraded Cornerstone (Column 4) of the Action Matrix. However, because the performance issues were well understood and appeared limited to occupational radiation safety, the NRC considered the regulatory actions specified for Column 3 were more appropriate than those for Column 4. With satisfactory completion of the inspection procedure 95002 inspection, documented in the August 12, 2013, inspection report, this deviation is no longer in effect.

Based on this assessment, we plan to conduct ROP baseline inspections at your facility. However, the radiation protection baseline inspections will focus on those radiation protection issues identified above and the biennial Problem Identification and Resolution team inspection will review your corrective actions for your extent of cause evaluations completed in response to the White findings. 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 nine 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.

E. Harkness

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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). 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. Michael Kunowski, Branch 5 Chief, Division of Reactor Projects, at 630-829-9618, with any questions you may have regarding this letter or the inspection plan.

Sincerely,

*/RA/*

Cynthia D. Pederson  
Regional Administrator

Docket No. 50-440  
License No. NPF-58

Enclosure: Perry Nuclear Power Plant  
Inspection/Activity Plan

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Letter to E. Harkness from C. Pederson dated September 3, 2013

SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR PERRY NUCLEAR  
POWER PLANT (REPORT 0500440/2013006)

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**Perry**  
**Inspection / Activity Plan**  
**09/01/2013 - 12/31/2014**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			<b>BI EPR - EP ROUTINE INSPECTION / PI VERIFICATION</b>		<b>2</b>
1	09/16/2013	09/20/2013	IP 7111402	Alert and Notification System Testing	
1	09/16/2013	09/20/2013	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1	09/16/2013	09/20/2013	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1	09/16/2013	09/20/2013	IP 71151	Performance Indicator Verification	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	09/23/2013	09/27/2013	IP 71124.07	Radiological Environmental Monitoring Program	
			<b>BI PI&amp;R - BIENNIAL PI&amp;R INSPECTION</b>		<b>5</b>
1	11/04/2013	11/22/2013	IP 71152B	Problem Identification and Resolution	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>2</b>
1	10/28/2013	11/01/2013	IP 71124.05	Radiation Monitoring Instrumentation	
1	10/28/2013	11/01/2013	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	11/18/2013	11/22/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	11/18/2013	11/22/2013	IP 71124.04	Occupational Dose Assessment	
1	11/18/2013	11/22/2013	IP 71151-BI01	Reactor Coolant System Activity	
1	11/18/2013	11/22/2013	IP 71151-OR01	Occupational Exposure Control Effectiveness	
1	11/18/2013	11/22/2013	IP 71151-PR01	RETS/ODCM Radiological Effluent	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	01/13/2014	01/17/2014	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	01/13/2014	01/17/2014	IP 71124.04	Occupational Dose Assessment	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	02/10/2014	02/14/2014	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
			<b>BI ENG - COMPONENT DESIGN BASIS INSPECTION</b>		<b>6</b>
1	03/03/2014	04/04/2014	IP 7111121	Component Design Bases Inspection	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	05/05/2014	05/09/2014	IP 71124.05	Radiation Monitoring Instrumentation	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	06/16/2014	06/20/2014	IP 71124.02	Occupational ALARA Planning and Controls	
1	06/16/2014	06/20/2014	IP 71151-BI01	Reactor Coolant System Activity	
1	06/16/2014	06/20/2014	IP 71151-OR01	Occupational Exposure Control Effectiveness	
1	06/16/2014	06/20/2014	IP 71151-PR01	RETS/ODCM Radiological Effluent	

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

**Perry**  
**Inspection / Activity Plan**  
**09/01/2013 - 12/31/2014**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			<b>BI EPX - EP EXERCISE INSPECTION / PI VERIFICATION</b>		<b>2</b>
1	09/22/2014	09/26/2014	IP 71151	Performance Indicator Verification	
			<b>ISFSI - ISFSI OPERATION AT REACTOR SITE</b>		<b>1</b>
1	10/01/2014	10/31/2014	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	10/20/2014	10/24/2014	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
			<b>BI OLRQ - BIENNIAL REQUAL PROGRAM INSPECTION</b>		<b>2</b>
1	12/15/2014	12/19/2014	IP 7111111B	Licensed Operator Requalification Program	

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