



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

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

March 3, 2010

Mr. Mark Bezilla  
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: ANNUAL ASSESSMENT LETTER - PERRY NUCLEAR PLANT  
(05000440/2010001)

Dear Mr. Bezilla:

On February 11, 2010, the NRC staff completed its performance review of the Perry Nuclear Plant. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2009. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and enclosed inspection plan do not include security information. A separate letter designated and marked as "Official Use Only - Security Information" will include the Security Cornerstone review and resultant inspection plan.

Overall, Perry Nuclear Power Plant operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter, as well as for the first three quarters of the assessment cycle, was within the Licensee Response column of the NRC's Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all PIs indicating performance at a level requiring no additional NRC oversight (Green). Therefore, we plan to conduct reactor oversight process (ROP) baseline inspections at your facility. We also plan on conducting several special and infrequently performed Inspection Procedures (IPs) which include: IP 60854.1, "Preoperational testing of Independent Spent Fuel Storage Installations at Operating Plants;" and IP 60855.1, "Operation of an Independent Spent Fuel Storage Installation at Operating Plants."

In our mid-cycle assessment letter dated September 1, 2009, we advised you of a substantive cross-cutting issue in the cross-cutting area of human performance. During this most recent assessment period, Perry has continued to exhibit weaknesses in the area of human performance. The total number of findings with documented cross-cutting aspects in human performance remained relatively constant, changing from 20 during the last assessment period to 19 during the most recent one. Our assessment of the findings identified

three cross-cutting themes in the human performance area: work control - planning (H.3(a)), five findings; work practices - human error prevention techniques (H.4(a)), four findings; and work control - oversight (H.4(c)), four findings. However, during the past assessment period, the number of findings with the same cross-cutting aspect of resources-documentation/procedures (H.2(c)) was reduced to below the threshold for substantive cross-cutting issue themes. While we will continue to monitor the human performance area as a whole in addition to the current cross-cutting themes, based on the actions you have taken to decrease the number of findings in the H.2(c) aspect, the theme in this aspect is being closed.

This assessment period is the fifth consecutive assessment period identifying a substantive cross-cutting issue in the human performance area first opened in our March 3, 2008, end-of-cycle assessment letter [ADAMS Ref. ML 080600303]. It is apparent that the development of causal evaluations and implementation of corrective actions has not been effective in demonstrating sustainable performance in the human performance arena. Therefore, the NRC has a continuing concern with the scope of your efforts and progress in addressing this cross-cutting area and has concluded that the substantive cross-cutting issue in human performance will remain open. The human performance substantive cross-cutting issue will remain open until all cross-cutting themes have been cleared in the area of human performance. To clear each theme, we will assess whether your corrective actions have resulted in a positive sustainable improvement in the area and will consider the number of findings in the theme. As part of our continuing review of this issue, a Problem Identification and Resolution (PI&R) follow-up inspection item will be performed in accordance with IP 71152, "Identification and Resolution of Problems," Section 03.02, "Selected Issue Follow-up Inspection," during the upcoming assessment period.

On November 12, 2009, at a public meeting to address the ongoing human performance substantive cross-cutting issue, you discussed the progress of the corrective actions you have taken as well as the reasons you believed these actions would be more effective than actions previously undertaken. We recognize your attempts to refocus site personnel on their human performance commitments using stand-downs and by placing emphasis on the use of human performance tools. However, the number of human performance findings remains high, and we believe that it is important for you to demonstrate progress in these areas as well as a clear understanding of how overall safety culture improvements can assist in your recovery. Therefore, because your efforts to effect improvements in the human performance area have not been sufficiently effective, we request that you have an independent assessment of safety culture performed at your site. This assessment will help improve your understanding of how the overall safety culture at your site may be impacting your ability to achieve sustained results in the human performance area. This assessment should be completed in time to be reviewed during the NRC biennial PI&R inspection scheduled for November 2010.

Additionally, in our mid-cycle letter dated September 1, 2009, we advised you of a substantive cross-cutting issue in the cross-cutting area of PI&R. For this assessment period, we identified four findings in the PI&R area with the same aspect of the corrective action program - thorough evaluation (P.1(c)). Because your corrective actions have been unsuccessful in addressing this

issue, you have failed to demonstrate an improving trend in this aspect. Additionally, we remain concerned that a weakness in the aspect of thorough evaluation may be a significant contributor to your inability to correct your human performance issues. Because of the continued difficulties with PI&R, the NRC has a concern with the scope of your efforts and progress in addressing the cross-cutting area performance deficiencies and has concluded that a substantive cross-cutting issue exists in this area. This substantive cross-cutting issue will remain open until all cross-cutting themes have been cleared in the area of PI&R. To clear each theme, we will assess whether your corrective actions have resulted in a positive sustainable improvement in the area and will consider the number of findings in the theme. We request that you address your progress and plans regarding this substantive cross-cutting issue during our upcoming end-of-cycle meeting. We will contact you separately to schedule this meeting.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through June 30, 2011. The inspection plan is provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last 9 months of the inspection plan are tentative and may be revised at the mid-cycle review.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (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).

If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact Jamnes Cameron at 630-829-9833 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

**/RA/**

Steven West, Director  
Division of Reactor Projects

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

Enclosure: Perry Inspection/Activity Plan

cc w/encl: Distribution via ListServ

**Perry**  
**Inspection / Activity Plan**  
**03/01/2010 - 06/30/2011**

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
03/08/2010	03/12/2010	IP 2515/173	Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative	
03/08/2010	03/12/2010	IP 71151-BI01	Reactor Coolant System Activity	
		<b>ISFSI - ISFSI INSPECTION</b>		<b>2</b>
07/01/2010	09/30/2010	IP 60854.1	Preoperational Testing of Independent Spent Fuel Storage Facility Installation at Operating Plants	
09/01/2010	12/31/2010	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>2</b>
04/19/2010	04/23/2010	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
04/19/2010	04/23/2010	IP 71124.02	Occupational ALARA Planning and Controls	
04/19/2010	04/23/2010	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
04/19/2010	04/23/2010	IP 71124.04	Occupational Dose Assessment	
04/19/2010	04/23/2010	IP 71151-OR01	Occupational Exposure Control Effectiveness	
		<b>BI ENG - TRIENNIEL ENGINEERING PERM MODS/50.59</b>		<b>3</b>
06/14/2010	07/02/2010	IP 7111117T	Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications	
		<b>OL PREP - PERRY INIT PREP - APRIL 2010</b>		<b>3</b>
05/24/2010	05/28/2010	W90223	OL - INITIAL EXAM - MAY 2010 - PERR	
		<b>OL EXAM - PERRY INIT EXAM - JUNE 2010</b>		<b>3</b>
06/14/2010	06/25/2010	W90223	OL - INITIAL EXAM - MAY 2010 - PERR	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>2</b>
07/19/2010	07/23/2010	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
07/19/2010	07/23/2010	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
07/19/2010	07/23/2010	IP 71124.04	Occupational Dose Assessment	
07/19/2010	07/23/2010	IP 71124.07	Public Radiation Safety	
07/19/2010	07/23/2010	IP 71151-PR01	RETS/ODCM Radiological Effluent	
		<b>BI EP - EP EXERCISE INSPECTION / PI VERIFICATION</b>		<b>3</b>
09/27/2010	10/01/2010	IP 7111401	Exercise Evaluation	
09/27/2010	10/01/2010	IP 71151-EP01	Drill/Exercise Performance	
09/27/2010	10/01/2010	IP 71151-EP02	ERO Drill Participation	
09/27/2010	10/01/2010	IP 71151-EP03	Alert & Notification System	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
10/04/2010	10/08/2010	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
		<b>BI PI&amp;R - BIENNIAL PI&amp;R INSPECTION</b>		<b>3</b>
11/01/2010	11/19/2010	IP 71152B	Identification and Resolution of Problems	

**Perry**  
**Inspection / Activity Plan**  
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Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		<b>BI OL - BIENNIAL REQUAL PROGRAM INSPECTION</b>		<b>2</b>
12/13/2010	12/17/2010	IP 7111111B	Licensed Operator Requalification Program	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
01/24/2011	01/28/2011	IP 71124.05	Radiation Monitoring Instrumentation	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
04/18/2011	04/22/2011	IP 2515/179	Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in NSTS	
04/18/2011	04/22/2011	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
04/18/2011	04/22/2011	IP 71124.02	Occupational ALARA Planning and Controls	
04/18/2011	04/22/2011	IP 71151-OR01	Occupational Exposure Control Effectiveness	
		<b>BI ENG - ENGINEERING INSERVICE INSPECTION</b>		<b>1</b>
04/18/2011	05/22/2011	IP 7111108G	Inservice Inspection Activities - BWR	
		<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
06/27/2011	07/01/2011	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
06/27/2011	07/01/2011	IP 71151-PR01	RETS/ODCM Radiological Effluent	

issue, you have failed to demonstrate an improving trend in this aspect. Additionally, we remain concerned that a weakness in the aspect of thorough evaluation may be a significant contributor to your inability to correct your human performance issues. Because of the continued difficulties with PI&R, the NRC has a concern with the scope of your efforts and progress in addressing the cross-cutting area performance deficiencies and has concluded that a substantive cross-cutting issue exists in this area. This substantive cross-cutting issue will remain open until all cross-cutting themes have been cleared in the area of PI&R. To clear each theme, we will assess whether your corrective actions have resulted in a positive sustainable improvement in the area and will consider the number of findings in the theme. We request that you address your progress and plans regarding this substantive cross-cutting issue during our upcoming end-of-cycle meeting. We will contact you separately to schedule this meeting.

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Sincerely,  
**/RA/**  
 Steven West, Director  
 Division of Reactor Projects

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Enclosure: Perry Inspection/Activity Plan

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Letter to M. Bezilla from S. West dated March 3, 2010.

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(05000440/2010001)

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