



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

September 2, 2014

Mr. Michael J. Pacilio  
Senior VP, Exelon Generation Co., LLC  
President and CNO, Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

**SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR BYRON STATION, UNITS 1 AND 2**

Dear Mr. Pacilio:

On August 5, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed its mid-cycle performance review of Byron Station, Units 1 and 2. The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from July 1, 2013 through June 30, 2014. 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, Byron Station, Units 1 and 2, was operated in a manner that preserved public health and safety and met all cornerstone objectives. The NRC determined that the performance at Byron Station, Units 1 and 2, during the most recent quarter, as well as the previous three quarters of the assessment period, 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. The NRC also plans to conduct infrequently performed inspection activities in accordance with Inspection Procedure 60855.1, "Operation of an ISFSI [Independent Spent Fuel Storage Installation] at Operating Plants," related to your ISFSI; and Inspection Procedure 71002, "License Renewal Inspection," associated with your license renewal application.

As a result of the Safety Culture Common Language Initiative, the terminology and coding of cross-cutting aspects were revised. All cross-cutting aspects identified during inspections conducted in calendar year 2014 reflect this revision to Inspection Manual Chapter (IMC) 0310. Cross-cutting aspects identified in 2013 using the 2013 terminology were converted to the latest revision in accordance with the cross-reference in IMC 0310 during the mid-cycle assessment review and evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305.

The enclosed inspection plan lists the inspections scheduled through December 31, 2015. 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

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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 accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) 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 me at 630-829-9620 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

**/RA/**

Eric R. Duncan, Chief  
Branch 3  
Division of Reactor Projects

Docket Nos. 50-454, 50-455  
License Nos. NPF-37, NPF-66

Enclosure: Byron Station  
Inspection/Activity Plan

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**Byron**  
**Inspection / Activity Plan**  
**09/01/2014 - 12/31/2015**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			<b>BI ISI - INSERVICE INSPECTION UNIT 2</b>		<b>2</b>
2	09/29/2014	10/23/2014	IP 7111108P	Inservice Inspection Activities - PWR	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1,2	10/06/2014	10/10/2014	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	10/06/2014	10/10/2014	IP 71151	Performance Indicator Verification	
			<b>BI EPRTN - EP ROUTINE INSPECTION / PI VERIFICATION</b>		<b>1</b>
1,2	10/20/2014	10/24/2014	IP 7111402	Alert and Notification System Testing	
1,2	10/20/2014	10/24/2014	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1,2	10/20/2014	10/24/2014	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1	10/20/2014	10/24/2014	IP 71151	Performance Indicator Verification	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1,2	11/03/2014	11/07/2014	IP 71124.07	Radiological Environmental Monitoring Program	
1	11/03/2014	11/07/2014	IP 71151-BI01		
1	11/03/2014	11/07/2014	IP 71151-OR01		
1	11/03/2014	11/07/2014	IP 71151-PR01		
			<b>BI OLRQ - BIENNIAL REQUAL PROGRAM INSPECTION</b>		<b>2</b>
1,2	12/01/2014	12/05/2014	IP 7111111B	Licensed Operator Requalification Program	
			<b>ISFSI - ISFSI</b>		<b>2</b>
1,2	02/01/2015	03/31/2015	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	02/23/2015	02/27/2015	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
			<b>BI CDBI - COMPONENT DESIGN BASIS INSPECTION</b>		<b>6</b>
1	04/20/2015	05/22/2015	IP 7111121	Component Design Bases Inspection	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	04/13/2015	04/17/2015	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	04/13/2015	04/17/2015	IP 71124.02	Occupational ALARA Planning and Controls	
			<b>BL EPX - EP EXERCISE INSPECTION / PI VERIFICATION</b>		<b>2</b>
1,2	04/13/2015	04/17/2015	IP 7111407	Exercise Evaluation - Hostile Action (HA) Event	
1,2	04/13/2015	04/17/2015	IP 7111408	Exercise Evaluation – Scenario Review	
1	04/13/2015	04/17/2015	IP 71151	Performance Indicator Verification	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	05/11/2015	05/15/2015	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	05/11/2015	05/15/2015	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.

**Byron**  
**Inspection / Activity Plan**  
**09/01/2014 - 12/31/2015**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			<b>PI&amp;R - PROBLEM I &amp; R BIENNIAL</b>		<b>4</b>
1, 2	07/20/2015	08/07/2015	IP 71152B	Problem Identification and Resolution	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	08/17/2015	08/21/2015	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	08/17/2015	08/21/2015	IP 71151-BI01		
1	08/17/2015	08/21/2015	IP 71151-OR01		
1	08/17/2015	08/21/2015	IP 71151-PR01		
			<b>BI ISI - INSERVICE INSPECTION UNIT 1</b>		<b>1</b>
1	09/08/2015	09/29/2015	IP 7111108P	Inservice Inspection Activities - PWR	
			<b>BI RP - RADIATION PROTECTION BASELINE INSPECTION</b>		<b>1</b>
1	11/16/2015	11/20/2015	IP 71124.05	Radiation Monitoring Instrumentation	

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