



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

September 4, 2012

Mr. Michael J. Pacilio
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer (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 8, 2012, the 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, 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 Inspection Manual Chapter 0305, "Operating Reactor Assessment Program."

The NRC determined that the performance at Byron Station Unit 1 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).

The NRC determined the performance at Byron Station Unit 2 during the most recent quarter was within the Licensee Response column of the NRC's 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). Plant performance for the first two quarters of the assessment period was within the Regulatory Response column of the NRC's ROP Action Matrix based on one inspection finding being classified as having low-to-moderate safety significance (i.e., White) and all PIs indicated that your performance was within the nominal, expected range (i.e., Green). The White finding involved the failure to ensure that a flange connection on the upper lube oil cooler of the 2A diesel generator was correctly torqued following maintenance. This White finding was closed on August 26, 2011, as documented in our letter to you dated October 4, 2011 [ML112770516]. Unit 2 returned to the Licensee Response column of the ROP Action Matrix in the first quarter of 2012.

Therefore, the NRC plans to conduct ROP baseline inspections at your facility. We also plan to conduct several special and infrequently performed inspections related to the operation of the Independent Spent Fuel Storage Installation, Temporary Instructions (TIs) and a follow-up inspection. These inspections include Inspection Procedure (IP) 60855.1, "Operation of an Independent Spent Fuel Storage Installation at Operating Plants," TI-182, "Review of the Implementation of an Industry Initiative to Control the Degradation of Underground Piping and Tanks," TI-187, "Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns," and TI-188, "Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns." In addition, a follow-up inspection will be conducted using IP 92723, "Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the Same Area in a 12-Month Period," to evaluate your corrective actions and extent of condition review related to a Steam Generator Margin-to-Overfill Compliance Backfit [ML110190808] that was issued.

The enclosed inspection plan lists the inspections scheduled through December 31, 2013. 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 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 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 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 and 50-455
License Nos. NPF-37 and NPF-66

Enclosure: Byron Station Inspection/Activity Plan

cc w/encl: Distribution via ListServ™

M. Pacilio

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Docket Nos. 50-454 and 50-455
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Enclosure: Byron Station Inspection/Activity Plan

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Letter to M. Pacilio from E. Duncan dated September 4, 2012.

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

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Byron
Inspection / Activity Plan
09/01/2012 - 12/31/2013

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		FOLLOWUP - MARGIN TO OVERFILL BACKFIT CA/EOC RVW		1
11/01/2012	12/20/2012	IP 92723	Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the S	
		TI-187 - TI-187 FLOODING WALKDOWN		2
07/01/2012	12/31/2012	IP 2515/187	Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns	
		TI-188 - TI-188 SEISMIC WALKDOWN		2
07/01/2012	12/31/2012	IP 2515/187	Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns	
		BI ISI - INSERVICE INSPECTION UNIT 1		2
09/10/2012	10/05/2012	IP 7111108P	Inservice Inspection Activities - PWR	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
09/17/2012	09/21/2012	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
09/17/2012	09/21/2012	IP 71124.02	Occupational ALARA Planning and Controls	
		BI OLRQ - BIENNIAL REQUAL PROGRAM INSPECTION		2
10/29/2012	11/02/2012	IP 7111111B	Licensed Operator Requalification Program	
		BI FIRE - FIRE PROTECTION INSPECTION & BAG TRIP		3
01/14/2013	02/15/2013	IP 7111105T	Fire Protection [Triennial]	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
12/10/2012	12/14/2012	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
02/25/2013	03/01/2013	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
		OL PREP - BYRON INIT PREP 04/2013		3
04/01/2013	04/05/2013	W90282	OL - INITIAL EXAM - 2013 APR-MAY - BYRON	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
04/08/2013	04/12/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
04/08/2013	04/12/2013	IP 71124.02	Occupational ALARA Planning and Controls	
		ISI INSP - ISI BASELINE INSPECTION		2
04/08/2013	04/26/2013	IP 7111108P	Inservice Inspection Activities - PWR	
		OL EXAM - BYRON INIT EXAM - 04/2013		3
04/29/2013	05/10/2013	W90282	OL - INITIAL EXAM - 2013 APR-MAY - BYRON	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
05/13/2013	05/17/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
05/13/2013	05/17/2013	IP 71124.04	Occupational Dose Assessment	
		BI PI&R - BIENNIAL PI&R INSPECTION		4
09/09/2013	09/27/2013	IP 71152B	Problem Identification and Resolution	

Byron
Inspection / Activity Plan
09/01/2012 - 12/31/2013

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		ISFSI - ISFISI INSPECTION		1
09/01/2013	10/31/2013	IP 60856.1	Review of 10 CFR 72.212(b) Evaluations at Operating Plants	
		TI 182 - TI 182 BURIED PIPING PHASE 2		2
08/12/2013	08/16/2013	IP 2515/182	Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
08/19/2013	08/23/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
08/19/2013	08/23/2013	IP 71151-BI01	Reactor Coolant System Activity	
08/19/2013	08/23/2013	IP 71151-OR01	Occupational Exposure Control Effectiveness	
08/19/2013	08/23/2013	IP 71151-PR01	RETS/ODCM Radiological Effluent	
		BI EPX - EP EXERCISE INSPECTION / PI VERIFICATION		2
11/18/2013	11/22/2013	IP 7111401	Exercise Evaluation	
11/18/2013	11/22/2013	IP 71151	Performance Indicator Verification	
		BI HS - TRIENNIAL HEAT SINK INSPECTION		2
11/04/2013	11/08/2013	IP 7111107T	Heat Sink Performance	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
11/18/2013	11/22/2013	IP 71124.05	Radiation Monitoring Instrumentation	
		BI OLRQ - REQUALIFICATION PROGRAM INSPECTION		1
12/16/2013	12/20/2013	IP 7111111A	Licensed Operator Requalification Program - Annual Review	