



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

March 4, 2013

Mr. Michael J. Pacilio
Chief Nuclear Officer and
Senior Vice President
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: ANNUAL ASSESSMENT LETTER-BYRON STATION, UNITS 1 AND 2,
05000454/2012001 AND 05000455/2012001

Dear Mr. Pacilio:

On February 12, 2013, the Nuclear Regulatory Commission (NRC) staff completed its end-of-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 January 1, 2012, through December 31, 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.

Overall, Byron Station, Units 1 and 2, operated in a manner that preserved public health and safety and met all cornerstone objectives.

Plant performance for the most recent quarter, as well as the first three quarters of the assessment period at Byron Station, Units 1 and 2, 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 Phase II of Temporary Instruction 2515/182, "Review of Implementation of Industry Initiative to Control Degradation of Underground Piping and Tanks," at your facility.

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 12 months of the inspection plan are tentative and may be revised at the mid-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.

M. Pacilio

-2-

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

Enclosure: Byron Station Inspection/Activity Plan

cc w/encl: Distribution via ListServ

M. Pacilio

-2-

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Letter to M. Pacilio from E. Duncan dated March 4, 2013.

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05000454/2012001 AND 05000455/2012001

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Byron
Inspection / Activity Plan
03/01/2013 - 12/31/2014

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End				
			OL PREP - BYRON INIT PREP 04/2013		3
1	03/25/2013	03/29/2013	W90282	OL - INITIAL EXAM - 2013 APR-MAY - BYRON	
			ISI INSP - ISI BASELINE INSPECTION		2
1	04/08/2013	04/26/2013	IP 7111108P	Inservice Inspection Activities - PWR	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	04/15/2013	04/19/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	04/15/2013	04/19/2013	IP 71124.02	Occupational ALARA Planning and Controls	
			OL EXAM - BYRON INIT EXAM - 04/2013		3
1	04/29/2013	05/10/2013	W90282	OL - INITIAL EXAM - 2013 APR-MAY - BYRON	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	05/06/2013	05/10/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	05/06/2013	05/10/2013	IP 71124.04	Occupational Dose Assessment	
			BI PI&R - BIENNIAL PI&R INSPECTION		6
1	09/09/2013	09/27/2013	IP 71152B	Problem Identification and Resolution	
			BI EPX - EP EXERCISE INSPECTION / PI VERIFICATION		2
1	11/18/2013	11/22/2013	IP 7111401	Exercise Evaluation	
1	11/18/2013	11/22/2013	IP 71151	Performance Indicator Verification	
			TI 182 - TI 182 BURIED PIPING PHASE 2		2
1	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
1	08/12/2013	08/16/2013	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	08/19/2013	08/23/2013	IP 71124.07	Radiological Environmental Monitoring Program	
1	08/19/2013	08/23/2013	IP 71151-BI01	Reactor Coolant System Activity	
1	08/19/2013	08/23/2013	IP 71151-OR01	Occupational Exposure Control Effectiveness	
1	08/19/2013	08/23/2013	IP 71151-PR01	RETS/ODCM Radiological Effluent	
			STRIKE - STRIKE CONTINGUENCY - OPS / RP / MAINT		3
1, 2	09/30/2013	10/29/2013	IP 92709	Licensee Strike Contingency Plans	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	10/21/2013	10/25/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
			BI FIRE - FIRE PROTECTION INSPECTION & BAG TRIP		3
1	11/18/2013	12/13/2013	IP 7111105T	Fire Protection [Triennial]	

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

Byron
Inspection / Activity Plan
03/01/2013 - 12/31/2014

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			BI HS - TRIENNIAL HEAT SINK INSPECTION		2
1	11/04/2013	11/08/2013	IP 7111107T	Heat Sink Performance	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	11/18/2013	11/22/2013	IP 71124.05	Radiation Monitoring Instrumentation	
			ISFSI - ISFISI INSPECTION		1
1, 2	02/01/2014	03/01/2014	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	03/10/2014	03/14/2014	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
			BI ISI - INSERVICE INSPECTION UNIT 1		1
1	03/10/2014	03/28/2014	IP 7111108P	Inservice Inspection Activities - PWR	
			OL PREP - INITIAL EXAM - 06/2014		3
1	05/12/2014	05/16/2014	W90304	OL - INITIAL EXAM - 2014 MAR/NOV - BYRON	
			OL EXAM - INIT EXAM FOR 06/2014		3
1	06/02/2014	06/13/2014	W90304	OL - INITIAL EXAM - 2014 MAR/NOV - BYRON	
			BI MODS - MODIFICATION/50.59 INSPECTION		2
1, 2	06/09/2014	06/27/2014	IP 7111117T	Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	06/16/2014	06/20/2014	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1	06/16/2014	06/20/2014	IP 71124.04	Occupational Dose Assessment	
			RENEWAL - LICENSE RENEWAL INSPECTION		1
1, 2	08/04/2014	08/22/2014	IP 71002	License Renewal Inspection	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	09/08/2014	09/12/2014	IP 71124.05	Radiation Monitoring Instrumentation	
			BI ISI - INSERVICE INSPECTION UNIT 2		1
1	09/29/2014	10/23/2014	IP 7111108P	Inservice Inspection Activities - PWR	
			BI EPRTN - EP ROUTINE INSPECTION / PI VERIFICATION		2
1	11/03/2014	11/07/2014	IP 7111402	Alert and Notification System Testing	
1	11/03/2014	11/07/2014	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1	11/03/2014	11/07/2014	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1	11/03/2014	11/07/2014	IP 71151	Performance Indicator Verification	
			BI OLRQ - BIENNIAL REQUAL PROGRAM INSPECTION		2
1, 2	12/01/2014	12/05/2014	IP 7111111B	Licensed Operator Requalification Program	

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BI RP - RADIATION PROTECTION BASELINE INSPECTION					
1	12/08/2014	12/12/2014	IP 71124.02	Occupational ALARA Planning and Controls	
1	12/08/2014	12/12/2014	IP 71151	Performance Indicator Verification	

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