



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

March 3, 2010

Mr. Charles G. Pardee
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO), Exelon Nuclear
4300 Winfield Road
Warrenville IL 60555

SUBJECT: ANNUAL ASSESSMENT LETTER – BYRON STATION, UNITS 1 AND 2,
05000454/2010001 AND 05000455/2010001

Dear Mr. Pardee:

On February 10, 2010, the NRC staff completed its performance review of Byron Station, Units 1 and 2. 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.

Plant performance for the most recent quarter at Byron Station, Units 1 and 2, 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). While plant performance for the last three quarters was in the Licensee Response column of the Action Matrix, there was a safety significant inspection finding in the Initiating Events Cornerstone classified as having low-to-moderate safety significance (White) that affected the first quarter of the assessment period. The White finding was closed in the first quarter of 2009 and both units returned to the Licensee Response column in the second quarter of 2009.

Therefore, the NRC plans to conduct reactor oversight process (ROP) baseline inspections at your Byron Station. The NRC also plans to conduct several special and infrequently performed inspection procedures (IPs), which include inspections related to the pre-operational testing and operation of the Independent Spent Fuel Storage Installation.

The enclosed inspection plan details the inspections, less those related to security, scheduled through June 30, 2011. Please note that we plan on conducting two infrequently performed IPs: IP 60854.1, "Preoperational Testing of an Independent Spent Fuel Storage Facility Installation at Operating Plants," and IP 60855.1, "Operation of an Independent Spent Fuel Storage Installation at Operating Plants," this year at your Byron Station. The inspection plan is provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of our inspectors' 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 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).

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 Richard A. Skokowski at 630-829-9620 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA/

Steven West, Director
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

Byron
Inspection / Activity Plan
03/01/2010 - 06/30/2011

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		ISFSI - ISFSI INSPECTION		1
03/01/2010	06/30/2010	IP 60854.1	Preoperational Testing of Independent Spent Fuel Storage Facility Installation at Operating Plants	
06/01/2010	08/31/2010	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
04/12/2010	04/16/2010	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
04/12/2010	04/16/2010	IP 71124.02	Occupational ALARA Planning and Controls	
		BI ENG - ENGINEERING INSERVICE INSPECTION		1
04/19/2010	05/07/2010	IP 2515/172	Reactor Coolant System Dissimilar Metal Butt Welds	
04/19/2010	05/07/2010	IP 7111108P	Inservice Inspection Activities - PWR	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
07/12/2010	07/16/2010	IP 71124.05	Radiation Monitoring Instrumentation	
		BI EP - EP ROUTINE INSPECTION / PI VERIFICATION		2
07/12/2010	07/16/2010	IP 7111402	Radiological Environmental Monitoring Program	
07/12/2010	07/16/2010	IP 7111403	Emergency Response Organization Augmentation Testing	
07/12/2010	07/16/2010	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
07/12/2010	07/16/2010	IP 71151-EP01	Drill/Exercise Performance	
07/12/2010	07/16/2010	IP 71151-EP02	ERO Drill Participation	
07/12/2010	07/16/2010	IP 71151-EP03	Alert & Notification System	
		BI ENG - TRIENNIAL HEAT SINK INSPECTION		2
08/09/2010	08/13/2010	IP 7111107T	Heat Sink Performance	
		OL PREP - BYRON INIT PREP - SEPT. 2010		3
09/06/2010	09/10/2010	W90216	OL - INITIAL EXAM - SEPT/OCT 2010 - BYRO	
		OL EXAM - BYRON INIT EXAM - SEPT.-OCT. 2010		3
09/27/2010	10/08/2010	W90216	OL - INITIAL EXAM - SEPT/OCT 2010 - BYRO	
		HEAD - POLAR CRANE SINGLE FAILURE PROOF UPGRADE		1
10/05/2010	10/22/2010	IP 7111120	Refueling and Other Outage Activities	
		BI ENG - TRIENNIAL FIRE PROTECTION INSPECTION		3
10/18/2010	11/05/2010	IP 7111105T	Fire Protection [Triennial]	
		BI ENG - TRIENNIAL FIRE INS INFO GATHERING TRIP		5
10/04/2010	10/08/2010	IP 7111105T	Fire Protection [Triennial]	
		BI OL - LIC. OPERATOR REQUAL. PROGRAM EVALUATION		2
10/25/2010	10/29/2010	IP 7111111B	Licensed Operator Requalification Program	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
11/29/2010	12/03/2010	IP 2515/179	Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in NSTS	

Byron
Inspection / Activity Plan
03/01/2010 - 06/30/2011

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
11/29/2010	12/03/2010	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
11/29/2010	12/03/2010	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
11/29/2010	12/03/2010	IP 71151-BI01	Reactor Coolant System Activity	
11/29/2010	12/03/2010	IP 71151-OR01	Occupational Exposure Control Effectiveness	
11/29/2010	12/03/2010	IP 71151-PR01	RETS/ODCM Radiological Effluent	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
01/10/2011	01/14/2011	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
01/10/2011	01/14/2011	IP 71124.04	Occupational Dose Assessment	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
03/14/2011	03/18/2011	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
03/14/2011	03/18/2011	IP 71124.02	Occupational ALARA Planning and Controls	
		BI ENG - ENGINEERING INSERVICE INSPECTION - U1		1
03/14/2011	04/09/2011	IP 7111108P	Inservice Inspection Activities - PWR	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
04/11/2011	04/15/2011	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
04/11/2011	04/15/2011	IP 71124.07	Public Radiation Safety	
		BI ENG - TRIENNIAL ENGINEERING PERM MODS/50.59		3
05/09/2011	05/27/2011	IP 7111117T	Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications	

C. Pardee

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Steven West, Director
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cc w/encl: Distribution via ListServ

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Letter to C. Pardee from S. West dated March 3, 2010.

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05000454/2010001 AND 05000455/2010001

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