



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

March 4, 2011

Mr. Timothy S. Rausch
Senior Vice President and Chief Nuclear Officer
PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603-0467

SUBJECT: ANNUAL ASSESSMENT LETTER FOR SUSQUEHANNA STEAM ELECTRIC
STATION, UNITS 1 AND 2 (05000387/2010001 and 05000388/2010001)

Dear Mr. Rausch:

On February 8, 2011, the Nuclear Regulatory Commission (NRC) completed its end-of-cycle performance review of the Susquehanna Steam Electric Station (Susquehanna) 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, 2010 through December 31, 2010. 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 performance review and enclosed inspection plan do not include security information. A separate letter will include the NRC's assessment of your performance in the Security Cornerstone and its security-related inspection plan.

The NRC determined that overall, Susquehanna Units 1 and 2 operated in a manner that preserved public health and safety and met all cornerstone objectives. The NRC determined the performance at Susquehanna Unit 1 during the most recent quarter was within the Regulatory Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix because of one finding having low to moderate safety significance (i.e., white). The White finding was related to an internal flooding event on July 16, 2010, which required the operators to insert a manual scram and isolate the normal heat sink. The finding was discussed in Inspection Report 05000387;388/2010004 (ML103160334)¹, finalized in a letter dated December 16, 2010 (ML103500332), and assigned to the 3rd quarter 2010.

The NRC determined the performance at Susquehanna Unit 2 was within the Licensee Response Column of the NRC's ROP Action Matrix because all inspection findings had very low safety significance (i.e., green), 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 Susquehanna Unit 2.

As discussed in our assessment follow-up letter on December 16, 2010 (ML103500332), the NRC had planned to conduct Inspection Procedure (IP) 95001, "Inspection For One Or Two White Inputs in a Strategic Performance Area," for the White finding. However, the NRC

¹ Designation in parenthesis refers to an ADAMS accession number. Documents referenced in this letter are publicly available using the accession number in ADAMS.

acknowledges that while outside of the 2010 assessment period, the unplanned scram of January 25, 2011, will cause Unit 1 to transition to the Degraded Cornerstone Column of the NRC's Action Matrix once the 1st quarter 2011 PI data for unplanned scrams is reported. As a result, the NRC will provide additional regulatory oversight to include a supplemental inspection using IP 95002, "Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area," when your staff notifies us of your readiness for this inspection. The IP 95002 inspection is conducted to provide assurance that the root causes and contributing causes of individual and collective risk-significant performance issues are understood, independently assess the extent of condition and extent of cause of individual and collective risk significant performance issues, and provide assurance that licensee corrective actions for risk significant performance issues are sufficient to address the root causes and contributing causes and prevent recurrence. On March 1, 2011, the PPL Manager- Regulatory Affairs (M Crowthers), informed the NRC that PPL requests that the NRC conduct the more detailed IP 95002 (in lieu of the previously planned IP 95001 inspection) to review and potentially close both the White finding and PI.

The NRC identified a cross-cutting theme during this assessment period in the Corrective Action Program (CAP) component of the Problem Identification and Resolution (PI&R) cross-cutting area. Specifically, PPL had four findings with a PI&R cross-cutting aspect of P.1(c) Corrective Action Program – Evaluation of Identified Problems. These findings included a White finding related to the July flooding event (ML103160334) and Green, non-cited violations related to control of Maintenance and Test Equipment (ML110400284), repetitive failures of the Control Structure Chillers (ML102250028), and the failure to correct inaccurate information in an Emergency Operating Procedure (ML100740339).

The NRC acknowledges that PPL completed a common cause analysis that identified evaluation weaknesses near the end of the 4th quarter of 2010, and that PPL developed corrective actions which will be implemented during the 1st and 2nd quarters of 2011. Notwithstanding, the NRC noted that PPL had a number of opportunities during 2010 to identify and address evaluation weaknesses prior to our identification of this cross-cutting theme. Significant among these opportunities was a biennial PI&R inspection (ML100740339) that identified programmatic CAP weaknesses during January 2010. In our evaluation of whether a substantive cross-cutting issue (SCCI) exists, the NRC staff did not have a concern with PPL's scope of efforts or progress to date to address the cross-cutting theme, once identified. Specifically, PPL has implemented corrective actions commensurate with the significance of the issues, and a reasonable duration of time has not yet passed to determine if these actions will be effective in substantially mitigating the theme. Therefore, the NRC determined that a SCCI does not exist in the PI&R cross-cutting area at this time.

The NRC will monitor your scope of efforts and progress in addressing the cross-cutting theme through the baseline inspection program and IP 95002 supplemental inspection to assess the adequacy of your efforts and to determine whether a continuing cross-cutting theme and SCCI should be assigned during subsequent assessment periods.

From January 1 to December 31, 2010, the NRC issued one severity level IV traditional enforcement violation associated with impeding the regulatory process (ML110400284). Therefore, the NRC plans to conduct IP 92702, "Follow-up on Traditional Enforcement Actions including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, and Alternative Dispute Resolution Confirmatory Orders," to follow-up on this violation.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through June 30, 2012. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last nine 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 IP 95002 inspection will be scheduled and conducted within 180 days of when you formally inform the NRC that you are ready for this inspection. In addition to the baseline inspections, we also plan on conducting IP 71004 regarding Unit 2 power up-rate activities and the IP 92702 follow-up inspection discussed above. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant.

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 website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact Paul Krohn at 610-337-5120 with any questions you have regarding this letter.

Sincerely,



Darrell J Roberts, Director
Division of Reactor Projects

Docket Nos. 50-387; 50-388
License Nos. NPF-14, NPF-22

cc w/encl: Distribution via ListServ
Susquehanna Inspection/ Activity Plan

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through June 30, 2012. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last nine 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 IP 95002 inspection will be scheduled and conducted within 180 days of when you formally inform the NRC that you are ready for this inspection. In addition to the baseline inspections, we also plan on conducting IP 71004 regarding Unit 2 power up-rate activities and the IP 92702 follow-up inspection discussed above. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant.

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/RA/
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Division of Reactor Projects

Docket Nos. 50-387; 50-388
License Nos. NPF-14, NPF-22

cc w/encl: Distribution via ListServ
Susquehanna Inspection/ Activity Plan

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ML110260317

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Susquehanna
Inspection / Activity Plan
01/01/2011 - 06/30/2012

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
			12/13EXM - INITIAL OPERATOR LICENSING EXAM		3
1	01/17/2011	01/21/2011	U01793	FY11- SUSQUEHANNA U1&2 INITIAL OPERATOR LICENSING EXAM	
			1/9EXAM - SUSQUEHANNA INITIAL EXAM		6
1	12/12/2011	12/16/2011	U01842	FY12-SUSQ INITIAL OPERATOR LICENSING EXAM	
1	01/16/2012	01/20/2012	U01842	FY12-SUSQ INITIAL OPERATOR LICENSING EXAM	
			71124 - HP		1
1,2	03/21/2011	03/25/2011	IP 2515/179	Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in NSTS	
1,2	03/21/2011	03/25/2011	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1,2	03/21/2011	03/25/2011	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	03/21/2011	03/25/2011	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1,2	03/21/2011	03/25/2011	IP 71124.05	Radiation Monitoring Instrumentation	
			7111108G - U2 INSERVICE INSPECTION		1
2	04/11/2011	04/15/2011	IP 7111108G	Inservice Inspection Activities - BWR	
			71004 - UNIT 2 POWER UPRATE INSPECTION		2
2	04/05/2011	05/15/2011	IP 71004	Power Uprate	
			71124 - HP		1
2	05/02/2011	05/06/2011	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
2	05/02/2011	05/06/2011	IP 71124.02	Occupational ALARA Planning and Controls	
2	05/02/2011	05/06/2011	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
			TRI FIRE - TRIENNIAL FIRE PROTECTION INSPECTION		4
1,2	06/06/2011	06/10/2011	IP 7111105T	Fire Protection [Triennial]	
1,2	06/20/2011	06/24/2011	IP 7111105T	Fire Protection [Triennial]	
			71124 - REMP		1
1,2	06/06/2011	06/10/2011	IP 71124.07	Radiological Environmental Monitoring Program	
			92702 - FOLLOW UP CA MSPSI SLIV VIOLATION		1
1,2	05/30/2011	06/30/2011	IP 92702	Followup On Corrective Actions For Violations And Deviations	
			711111B - SUSQ REQUAL INSP W/ P/F RESULTS		2
1,2	09/19/2011	09/23/2011	IP 7111111B	Licensed Operator Requalification Program	
			TI-177 - MANAGING GAS ACCUMULATION IN ECCS		3
1,2	08/29/2011	09/02/2011	IP 2515/177	Managing Gas Accumulation In Emergency Core Cooling, Decay Heat Removal & Containment Spray System	
			EP PROGR - EP PROGRAM INSPECTION		1
1,2	10/10/2011	10/14/2011	IP 7111402	Alert and Notification System Testing	
1,2	10/10/2011	10/14/2011	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1,2	10/10/2011	10/14/2011	IP 7111404	Emergency Action Level and Emergency Plan Changes	
1,2	10/10/2011	10/14/2011	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	

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

Susquehanna
Inspection / Activity Plan
01/01/2011 - 06/30/2012

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
EP PROGR - EP PROGRAM INSPECTION					1
1,2	10/10/2011	10/14/2011	IP 71151-EP01	Drill/Exercise Performance	
1,2	10/10/2011	10/14/2011	IP 71151-EP02	ERO Drill Participation	
1,2	10/10/2011	10/14/2011	IP 71151-EP03	Alert & Notification System	
71124 - HP					1
1,2	10/17/2011	10/21/2011	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
1,2	10/17/2011	10/21/2011	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1,2	10/17/2011	10/21/2011	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	10/17/2011	10/21/2011	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
71152B - PI&R					4
1,2	02/13/2012	02/17/2012	IP 71152B	Identification and Resolution of Problems	
1,2	02/27/2012	03/02/2012	IP 71152B	Identification and Resolution of Problems	
71124 - OCC RAD SAFETY					1
1,2	02/20/2012	02/24/2012	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1,2	02/20/2012	02/24/2012	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	02/20/2012	02/24/2012	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
7111108G - INSERVICE INSPECTION					1
1	04/02/2012	04/06/2012	IP 7111108G	Inservice Inspection Activities - BWR	
71124 - OCC RAD SAFETY					1
1	04/02/2012	04/06/2012	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	04/02/2012	04/06/2012	IP 71124.02	Occupational ALARA Planning and Controls	
60855 - ISFSI CAMPAING LOADING INSPECTION					1
1,2	06/01/2012	09/30/2012	IP 60855	Operation Of An ISFSI	

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