



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I**

2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

September 3, 2013

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

**SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN  
FOR SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2  
(REPORT 05000387/2013006 AND 05000388/2013006)**

Dear Mr. Rausch:

On August 13, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed its mid-cycle performance review of Susquehanna Steam Electric Station (Susquehanna) Units 1 and 2. The NRC reviewed the most recent quarterly performance indicators in addition to inspection results and enforcement actions from July 1, 2012, through June 30, 2013. 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, Susquehanna Unit 1 operated in a manner that preserved public health and safety and met all cornerstone objectives. Susquehanna Unit 1 was in the Regulatory Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix until the most recent quarter because of one finding having low to moderate safety significance (White) associated with the Initiating Events Cornerstone. 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. A supplemental inspection was successfully completed for the White finding and Unit 1 returned to the Licensee Response Column of the ROP Action Matrix on January 25, 2013, with the issuance of an inspection report and follow up assessment letter (ADAMS Accession No. ML13025A325). The NRC determined the performance at Susquehanna Unit 1 during the most recent quarter was within the Licensee Response Column because all inspection findings had very low (i.e., green) safety significance and all performance indicators demonstrated that your performance was within the nominal, expected range (i.e., green). Therefore, the NRC plans to conduct ROP baseline inspections at Unit 1.

The NRC determined the performance at Susquehanna Unit 2 during the most recent quarter was within the Regulatory Response Column of the NRC's ROP Action Matrix because all inspection findings had very low safety significance (Green) and one performance indicator (PI) was of low to moderate safety significance (White) in the Initiating Events cornerstone. Specifically the "Unplanned Scrams with Complications" PI exceeded the Green/White threshold value in the fourth quarter of 2012. Our assessment follow-up letter dated April 1, 2013 (ADAMS Accession No. ML13092A011) indicated the NRC plans to conduct a supplemental inspection in accordance with Inspection Procedure (IP) 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," after your staff has notified us of

your readiness for this inspection. This inspection procedure is conducted to provide assurance that the root causes and contributing causes of risk significant performance issues are understood, the extent of condition and cause were identified, and the corrective actions are sufficient to prevent recurrence. Your staff has notified us of your readiness for this inspection and it is scheduled to be completed in September 2013.

In our 2011 Mid-Cycle assessment letter dated September 1, 2011 (ADAMS Accession No. ML112430469), the NRC opened a substantive cross-cutting issue in P.1(c) - Evaluation of Identified Problems. Our letter indicated this substantive cross-cutting issue in P.1(c) would remain open until PPL had demonstrated sustainable performance improvement as evidenced by effective implementation of an appropriate corrective action plan that resulted in no safety significant findings and a notable reduction in the overall number of inspection findings with the same cross-cutting aspect. This substantive cross cutting issue in P.1(c) remained open in subsequent assessment letters because the exit criteria were not met.

For the current assessment period, the NRC has determined the exit criteria defined in our assessment letters were met. During this assessment period, the NRC determined PPL demonstrated sustainable improvement by effective implementation of corrective action plans that involved enhancements in your evaluation processes, augmented management oversight of evaluations to ensure quality and appropriate ongoing performance monitoring of your results. During the assessment period there were no safety significant findings related to evaluation quality. The number of findings identified with an aspect in P.1(c) decreased from six in 2011, to four in 2012, to three during this assessment period. Additionally, two of the findings identified during this assessment period with an aspect in P.1(c) involved evaluations completed in prior assessment periods before your corrective actions were fully implemented with sufficient time in place to monitor and make adjustments. The NRC concluded the reduction in the number of findings with an aspect in P.1(c) was notable considering these overall trends. Therefore, based on the exit criteria, the NRC has concluded that PPL has demonstrated sustainable improved performance in this cross-cutting aspect, and has closed this substantive cross-cutting issue. Continued focus by PPL is appropriate to maintain the quality of evaluations. The NRC will monitor your performance through baseline inspections and our normal periodic assessment process.

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 nine months of the inspection plan are tentative and may be revised at the mid-cycle performance review. In addition to baseline inspections, the NRC will perform Temporary Instruction (TI) 182, "Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks."

Additionally, our annual assessment letter dated March 4, 2013, identified NRC plans to conduct an inspection using IP 92723, "Follow-up Inspection of Three or More Severity Level IV Traditional Enforcement Violations in the Same Area in a 12-Month Period," when PPL indicates readiness for this inspection. This inspection will follow-up on three severity level IV traditional enforcement violations issued from January 1 to December 31, 2012. Our letter indicated the NRC conducted similar inspections using IP 92723 at Susquehanna in 2010 and 2012, and that our review would evaluate the recurring nature of these issues. Since our last assessment letter, two additional traditional enforcement Severity Level IV violations were issued. Our review will include your corrective actions related to these violations. Your staff has indicated readiness for this inspection and it is scheduled to be completed in October 2013.

Finally, during this assessment period the NRC issued an inspection report dated June 17, 2013, which documented two apparent violations being considered for escalated enforcement, and an associated green finding, each related to licensed operator medical examinations and incorporating appropriate restrictions into individual operator licenses (ADAMS Accession No. ML13168A020). The NRC subsequently issued a SLIII Notice of Violation in a letter dated August 28, 2013 (ADAMS Accession No. ML13241A027). As a result, the NRC plans to conduct IP 92702, "Follow-up on Traditional Enforcement Actions including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders and Alternate Dispute Resolution Confirmatory Orders," to follow-up on your actions related to the Notice of Violation. The NRC plans to perform IP 92702 when your staff has notified us of your readiness for this inspection.

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 will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Document 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 Mel Gray at (610)337-5209 with any questions you have regarding this letter.

Sincerely,

**/RA/**

Darrell J. Roberts, Director  
Division of Reactor Projects

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

Enclosure: Susquehanna Steam Electric Station Inspection/Activity Plan

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DOC NAME: S:\ROP ASSESSMENT MEETINGS ARCHIVE\ROP-14 MID-CYCLE REVIEW\BRANCH 4\SUSQUEHANNA\SUSQUEHANNA 2013 REVFINAL.DOCX  
 ADAMS Accession No. ML13246A163

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DRP	RI/DRP	RI/DRP	RI/DRP	
NAME	JGreives/SB for*	SBarber/SB*	MGray/SB for*	DRoberts/ DJR	
DATE	08/29/13	08/29/13	08/29/13	08/30 /13	

\*prior concurrence

OFFICIAL RECORD COPY

Susquehanna  
 Inspection / Activity Plan  
 07/01/2013 - 12/31/2014

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
			<b>7/8 EXM - SUSQ INITIAL EXAM</b>		<b>4</b>
1	07/08/2013	07/12/2013	U01868	FY13-SUSQ INITIAL OPERATOR LICENSING EXAM	
			<b>7111121 - CDBI</b>		<b>9</b>
1,2	07/29/2013	08/02/2013	IP 7111121	Component Design Bases Inspection	
1,2	08/12/2013	08/16/2013	IP 7111121	Component Design Bases Inspection	
1,2	08/26/2013	08/30/2013	IP 7111121	Component Design Bases Inspection	
			<b>95001 - 95001 SUPPLEMENTAL INSPECTION</b>		<b>2</b>
2	09/16/2013	09/20/2013	IP 95001	Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area	
			<b>EP PROGR - EP PROGRAM INSPECTION</b>		<b>1</b>
1,2	10/28/2013	11/01/2013	IP 7111402	Alert and Notification System Testing	
1,2	10/28/2013	11/01/2013	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1,2	10/28/2013	11/01/2013	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
			<b>92723 - 92723 - FOLLOWUP &gt; 3 SLIV</b>		<b>2</b>
1,2	10/14/2013	10/18/2013	IP 92723	Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the S	
			<b>7111111B - SUSQUEHANNA REQUAL INSP WITH P/F RESULTS</b>		<b>2</b>
1	10/28/2013	11/01/2013	IP 7111111B	Licensed Operator Requalification Program	
			<b>92702 - CORR ACTIONS FOR OPER MEDICAL VIOLATIONS</b>		<b>2</b>
1,2	10/28/2013	11/01/2013	IP 92702	Followup On Corrective Actions For Violations And Deviations	
			<b>ISFSI - ISFSI - NEUTRON SHIELD INSPECTION</b>		<b>2</b>
1,2	11/11/2013	11/15/2013	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
			<b>71124 - RADIATION SAFETY INSPECTION</b>		<b>1</b>
1,2	11/18/2013	11/22/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1,2	11/18/2013	11/22/2013	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	11/18/2013	11/22/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1,2	11/18/2013	11/22/2013	IP 71124.04	Occupational Dose Assessment	
1,2	11/18/2013	11/22/2013	IP 71151	Performance Indicator Verification	
			<b>711245 - RADIATION SAFETY</b>		<b>1</b>
1,2	03/17/2014	03/21/2014	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1,2	03/17/2014	03/21/2014	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	03/17/2014	03/21/2014	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1,2	03/17/2014	03/21/2014	IP 71124.04	Occupational Dose Assessment	
1,2	03/17/2014	03/21/2014	IP 71151	Performance Indicator Verification	
			<b>TI-182 - DEGRAD UNDERGROUND PIPING - PHASE 2</b>		<b>1</b>
1,2	03/31/2014	04/04/2014	IP 2515/182	Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping	

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

Susquehanna  
 Inspection / Activity Plan  
 07/01/2013 - 12/31/2014

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			<b>8/11EXAM - SUSQUEHANNA INITIAL EXAM</b>		<b>5</b>
1	07/14/2014	07/18/2014	U01896	FY14-SUSQUEHANNA INITIAL OPERATOR LICENSING EXAM	
1	08/11/2014	08/22/2014	U01896	FY14-SUSQUEHANNA INITIAL OPERATOR LICENSING EXAM	
			<b>7111108G - U1 INSERVICE INSPECTION</b>		<b>1</b>
1	04/21/2014	04/25/2014	IP 7111108G	Inservice Inspection Activities - BWR	
			<b>71152B - PI&amp;R BIENNIAL</b>		<b>1</b>
1,2	06/02/2014	06/07/2014	IP 71152B	Problem Identification and Resolution	
1,2	06/16/2014	06/21/2014	IP 71152B	Problem Identification and Resolution	
			<b>71124 - RADIATION SAFETY RETS</b>		<b>1</b>
1,2	06/16/2014	06/20/2014	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
1,2	06/16/2014	06/20/2014	IP 71151	Performance Indicator Verification	
			<b>TRI FI - TRIENNIAL FIRE PROTECTION</b>		<b>7</b>
1,2	08/04/2014	08/08/2014	IP 7111105T	Fire Protection [Triennial]	
1,2	08/18/2014	08/22/2014	IP 7111105T	Fire Protection [Triennial]	
			<b>71124 - RADIATION SAFETY RAD INSTS</b>		<b>1</b>
1,2	09/22/2014	09/26/2014	IP 71124.05	Radiation Monitoring Instrumentation	
			<b>71124.08 - RADWASTE</b>		<b>1</b>
1,2	10/06/2014	10/10/2014	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
			<b>EP EXER - EP EXERCISE INSPECTION</b>		<b>1</b>
1,2	10/20/2014	10/24/2014	IP 7111407	Exercise Evaluation - Hostile Action (HA) Event	
			<b>71124 - RADIATION SAFETY</b>		<b>1</b>
1,2	11/03/2014	11/07/2014	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1,2	11/03/2014	11/07/2014	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	11/03/2014	11/07/2014	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1,2	11/03/2014	11/07/2014	IP 71124.04	Occupational Dose Assessment	

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