



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

March 4, 2014

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 (REPORT 05000387/2013001
and 05000388/2013001)**

Dear Mr. Rausch:

On February 11, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed its end-of-cycle performance review of Susquehanna Steam Electric 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, 2013 through December 31, 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. The NRC determined the performance at Susquehanna Unit 1 during the most recent quarter 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 performance indicators demonstrated that your performance was within the nominal, expected range (i.e, green).

The NRC determined that performance at Susquehanna Unit 2 during the most recent quarter was within the Degraded Cornerstone Column of the NRC's ROP Action Matrix because two white PIs existed in the initiating events cornerstone in the third quarter of 2013. In the fourth quarter of 2012, the "Unplanned Scrams with Complications" PI crossed the green to white threshold, which moved Susquehanna Unit 2 to the regulatory response column from the licensee response column. You were notified of the change to the ROP Action Matrix Column in an assessment follow-up letter (Report 05000388/2013009) issued on April 1, 2013. On September 19, 2013, the NRC completed the required supplemental inspection in accordance with Inspection Procedure (IP) 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," for the "Unplanned Scrams with Complications" PI and documented satisfactory results in Report 05000388/2013011. Successful completion of a supplemental inspection under IP 95001 would typically have allowed Susquehanna Unit 2 to return to the Licensee Response Column from the Regulatory Response Column of the ROP Action Matrix when the associated PI returned to Green. However, Susquehanna Unit 2 had an unplanned scram on September 14, 2013, that resulted in crossing the green to white threshold for a second PI, "Unplanned Scrams per 7000 critical hours," for the third quarter of 2013. This

performance indicator result, in conjunction with the earlier White “Unplanned Scrams with Complications” performance indicator moved Susquehanna Unit 2 to the degraded cornerstone column from the regulatory response column. You were notified of the change to the ROP Action Matrix Column in an assessment follow-up letter (Report 05000388/2013014) issued on November 5, 2013.

Although both of the above described PIs returned to the nominal, expected range (i.e., green) in the fourth quarter of 2013, completion of the required supplemental inspection in accordance with Inspection Procedure (IP) 95002, “Supplemental Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area,” is required to return Susquehanna Unit 2 to the licensee response column. Therefore, the NRC will conduct this supplemental inspection to review the actions taken to address the Susquehanna Unit 2 performance issues, when your staff notifies the NRC of your readiness.

You should also be aware that the NRC plans to conduct a public meeting with you in which we will review station performance. During this meeting, in accordance with Inspection Manual Chapter (IMC) 0305, you will be given the opportunity to respond to any information contained in the annual assessment letter and to present any new or existing programs that are designed to maintain or improve current performance.

As a result of the Safety Culture Common Language Initiative, the terminology and coding of cross-cutting aspects were revised. All cross-cutting aspects identified during inspections conducted in calendar year (CY) 2014 will reflect this revision to Inspection Manual Chapter (IMC) 0310. The CY 2013 end-of-cycle assessments were conducted using the IMC 0310 guidance in effect in CY 2013 (dated October 28, 2011). Cross-cutting aspects identified in 2013 using the 2013 terminology will be converted to the latest revision in accordance with the cross-reference in IMC 0310 during the mid-cycle assessment review and evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305.

The enclosed inspection plan lists the inspections scheduled through June 30, 2015. 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 ROP baseline inspections, the NRC will perform Inspection Procedure (IP) 60855.1, “Operation of an ISFSI Independent Spent Fuel Storage Installation at Operating Plants,” IP 92702, “Follow-up on Corrective Actions for Violations and Deviations,” and IP 92709, “Licensee Strike Contingency Plans.” 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.

An NRC audit of licensee efforts towards compliance with Order EA-12-049, “Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events” is ongoing. This audit includes an onsite component in order for the NRC to evaluate mitigating strategies as described in licensee submittals, and to receive and review information relative to associated open items. This onsite activity will occur in the months prior to a declaration of compliance for the first unit at each site, and will aid staff in development of an ultimate Safety Evaluation for the site. The date for the onsite component at your site is being coordinated with your staff. A site-specific audit plan for the visit will be provided in advance to allow sufficient time for preparations.

From January 1 to December 31, 2013, the NRC issued three severity level IV traditional enforcement violations associated with willfulness. Therefore, the NRC plans to conduct Inspection Procedure 92723, "Follow-up Inspection of Three or More Severity Level IV Traditional Enforcement Violations in the Same Area in a 12-Month Period," to follow-up on these violations.

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 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 Fred Bower at (610)337-5200 with any questions you have regarding this letter.

Sincerely,

/RA/

William M. Dean
Regional Administrator

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

Enclosure: Inspection Plan

cc w/encl: Distribution via ListServ

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Susquehanna
Inspection / Activity Plan
01/01/2014 - 06/30/2015

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			92723 - 92723 - FOLLOWUP > 3 SLIV		1
1, 2	01/21/2014	01/24/2014	IP 92723	Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the S	
			92702 - OPER MEDICAL ENFORCEMENT FOLLOW UP		1
1, 2	02/24/2014	02/28/2014	IP 92702	Followup On Corrective Actions For Violations And Deviations	
			92723 - 92723 - FOLLOWUP >3 SLIV VIOLATIONS		2
1, 2	03/01/2014	06/30/2014	IP 92723	Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the S	
			TI-182 - DEGRAD UNDERGROUND PIPING - PHASE 2		1
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	
			8/11EXAM - SUSQUEHANNA INITIAL EXAM		4
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	
			STRIKE-P - STRIKE CONTINGENCY PLANNING		3
1, 2	04/11/2014	06/11/2014	IP 92709	Licensee Strike Contingency Plans	
			2515-189 - TI 2515-189 SNUBBERS		1
1, 2	04/21/2014	04/25/2014	IP 2515/189	Inspection to Determine Compliance of Dynamic Restraint (Snubber) Program with 10 CFR 50.55a	
			7111108G - U1 INSERVICE INSPECTION		1
1	04/21/2014	04/25/2014	IP 7111108G	Inservice Inspection Activities - BWR	
			71152B - PI&R BIENNIAL		1
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	
			71124 - RADIATION SAFETY		1
1, 2	05/12/2014	05/16/2014	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1, 2	05/12/2014	05/16/2014	IP 71124.02	Occupational ALARA Planning and Controls	
1, 2	05/12/2014	05/16/2014	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	05/12/2014	05/16/2014	IP 71124.04	Occupational Dose Assessment	
1, 2	05/12/2014	05/16/2014	IP 71151	Performance Indicator Verification	
			71124 - RADIATION SAFETY RETS		1
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	
			95002 - 95002 SUPPL INSP FOR IE DEGRADED CNRST		7
2	07/14/2014	07/18/2014	IP 95002	Supplemental Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Perfor	
2	07/28/2014	08/01/2014	IP 95002	Supplemental Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Perfor	

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

Susquehanna
Inspection / Activity Plan
01/01/2014 - 06/30/2015

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			ISFSI - ISFSI LOADING INSPECTION		1
1,2	07/28/2014	08/01/2014	IP 60855	Operation Of An ISFSI	
1,2	07/28/2014	08/01/2014	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
			TRI FI - TRIENNIAL FIRE PROTECTION		6
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]	
			71124 - RADIATION SAFETY RAD INSTS		1
1,2	09/22/2014	09/26/2014	IP 71124.05	Radiation Monitoring Instrumentation	
			71124.08 - RADWASTE		1
1,2	10/06/2014	10/10/2014	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
			EP EXER - EP EXERCISE INSPECTION		2
1,2	10/20/2014	10/24/2014	IP 7111407	Exercise Evaluation - Hostile Action (HA) Event	
			71124 - RADIATION SAFETY		1
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	
			7111107T - TRIENNIAL HEAT SINK		1
1,2	02/23/2015	02/27/2015	IP 7111107T	Heat Sink Performance	
			7111108G - U2 INSERVICE INSPECTION		1
2	04/20/2015	04/24/2015	IP 7111108G	Inservice Inspection Activities - BWR	
			71124 - RAD SAFETY INSPECTION		1
1,2	04/27/2015	05/01/2015	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1,2	04/27/2015	05/01/2015	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	04/27/2015	05/01/2015	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1,2	04/27/2015	05/01/2015	IP 71124.04	Occupational Dose Assessment	
1,2	04/27/2015	05/01/2015	IP 71151	Performance Indicator Verification	
			71124.07 - RAD SAFETY INSPECTION		1
1,2	06/15/2015	06/19/2015	IP 71124.07	Radiological Environmental Monitoring Program	
1,2	06/15/2015	06/19/2015	IP 71151	Performance Indicator Verification	

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