November 4, 2002

Mr. Bryce L. Shriver
Senior Vice President and
Chief Nuclear Officer
Susquehanna Steam Electric Station
PPL Susquehanna, LLC
769 Salem Blvd., NUCSB3
Berwick, PA 18603-0035

SUBJECT SUSQUEHANNA STEAM ELECTRIC STATION - NRC-EVALUATED EMERGENCY PREPAREDNESS EXERCISE INSPECTION REPORT 50-387/02-011, 50-388/02-011

Dear Mr. Shriver:

The enclosed report documents an inspection at the Susquehanna Steam Electric Station, Units 1 & 2, which evaluated the performance of your emergency response organization during the October 8, 2002, full-participation exercise and the post-exercise critique as specified in the reactor oversight program. The inspectors discussed the findings of this inspection with you and other members of your staff on October 11, 2002.

This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (green). This issue was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because it was entered into your corrective action program, the NRC is treating this issue as a Non-Cited violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny this non-cited violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Region I, the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Susquehanna facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be 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).

Should you have any questions regarding this report, please contact Mr. Richard J. Conte at (610) 337-5183.

Sincerely,

**/RA/**

Richard J. Conte, Chief
Operational Safety Branch
Division of Reactor Safety

Docket Nos: 50-387, 50-388
License Nos: NPF-14, NPF-22

Enclosures: Inspection Report No. 50-387/02-011, 50-388/02-011
Attachment 1: Supplemental Information

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REGION I

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| Docket Nos: | 50-387, 50-388 |
| License Nos: | NPF-14, NPF-22 |
| Report Nos: | 50-387/02-011, 50-388/02-011 |
| Licensee: | PPL Susquehanna, LLC |
| Facilities: | Susquehanna Steam Electric Station, Units 1&2 |
| Location: | Berwick, PA 18603 |
| Dates: | October 8-11, 2002 |
| Inspectors: | N. McNamara, Sr. Emergency Preparedness Inspector, DRS, RI<br>A. Blamey, Sr. Operations Engineer<br>J. Richmond, Resident Inspector, Susquehanna<br>J. Noggle, Sr. Health Physicist |
| Approved by: | Richard J. Conte, Chief<br>Operational Safety Branch<br>Division of Reactor Safety |

## SUMMARY OF FINDINGS

IR 05000387/02-011, IR 05000388/02-011; PPL Susquehanna, LLC; on 10/8-11/2002; Susquehanna Steam Electric Station; Units 1&2. Emergency Preparedness Exercise and Performance Indicator Review.

This team inspection was conducted by region based inspectors and a resident inspector. This inspection identified one Green finding, that was a non-cited violation. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609 "Significant Determination Process" (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversite Process," Revision 3, dated July 2000.

### A. Inspector Identified Findings

**Cornerstone: Emergency Preparedness**

- **Green.** The inspectors identified a finding of very low safety significance (Green) that is also a non-cited violation of 10 CFR 50.47(b)(14) and Appendix E.IV.F.2.g., formal critiques shall identify weak or deficient areas that need correction. The licensee failed to identify an exercise deficiency regarding the inadequate performance of an in-plant repair team in performing a critical task to stop the off-site release during the biennial full scale exercise. Consequently, the repair team was exposed to a higher (simulated) dose than necessary and an opportunity to stop the off-site release was significantly delayed.

  This finding was determined to be of very low safety significance (Green) by the using the Emergency Preparedness (EP) SDP, Manual Chapter 0609, EP Risk Determination Flow Chart, Sheet 1, Second Column because the finding was identified during an EP exercise with simulated activities and is associated with the failure to identify a problem associated with a non-risk significant planning standard. This finding is more than minor because it could be reasonably viewed as a precursor to a significant event in that had this been an actual event, PPL could have missed an opportunity to quickly stop a radiological release to the public and to minimize the dose exposure to their emergency workers.

### B. Licensee Identified Findings

None

Report Details

## 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

### 1EP1 Exercise Evaluation

a. Inspection Scope

Prior to the inspection, an in-office review was conducted of the licensee's exercise objectives and scenario submitted to the NRC on July 31, 2002 to determine if the Susquehanna exercise would test major elements of the licensee's Emergency Plan as required by 10 CFR 50.47(b)(14). The onsite inspection consisted of the following review and assessment:

- The adequacy of the licensee's performance on the biennial full-participation exercise performance by primarily focusing on the implementation of the risk-significant planning standards (RSPS) in 10 CFR 50.47 (b) (4), (5), (9) & (10) which are emergency classification, offsite notification, radiological assessment, and protective action recommendations (PARs), respectively.

- The overall adequacy of the licensee's emergency response facilities and their implementation of NUREG-0696, "Functional Criteria for Emergency Response Facilities" and Emergency Plan commitments. The facilities assessed were the simulator, technical support center (TSC), the operations support center (OSC) and the emergency operations facility (EOF).

- Other performance areas besides the RSPS, such as, the emergency response organization's (ERO) recognition of abnormal plant conditions, command and control, intra- and inter-facility communications, prioritization of mitigation activities, utilization of repair and field monitoring teams, interface with offsite agencies, and the overall implementation of the emergency plan and implementing procedures.

- Past performance issues from NRC inspection reports and licensee drill reports to determine effectiveness of corrective actions as demonstrated during this exercise to ensure compliance with 10CFR50.47(b)(14).

- The post-exercise critique to evaluate the licensee's self-assessment of their ERO performance during the exercise and to ensure compliance with 10CFR50 Appendix E.IV.F.2.g.

In addition, Condition Report No. 428001 was reviewed that was generated and entered into the corrective action program to address inspectors' observations regarding PPL's method for calculating core damage assessment.

b. Findings

Introduction

The inspectors identified a finding of very low safety significance (Green) that is also a non-cited violation of 10 CFR 50.47(b)(14) and Appendix E.IV.F.2.g., formal critiques shall identify weak or deficient areas that need correction. The licensee failed to identify an exercise deficiency regarding the inadequate performance of an in-plant repair team in performing a critical task to stop the off-site release during the biennial full scale exercise. Consequently, the repair team was exposed to a higher (simulated) dose than necessary and an opportunity to stop the off-site release was significantly delayed.

Description

The TSC's most significant work priority was to isolate the air supply to the main steam isolation valve (MSIV) for stopping an on-going radiological release. The NRC observed several problems with the dispatching and performance of the in-plant team assigned to perform this critical task. The following observations were not identified by PPL during their exercise critique:

1. The job pre-brief took more than 30 minutes and there appeared to be a lack of urgency by the team to perform the task resulting in an unnecessary delay in reaching the actual location of the MSIV.

2. A mis-communication between the damage control coordinator and the maintenance coordinator resulted in assigning the team to perform a visual inspection of the valve condition and position, rather than attempting to close the air supply to the MSIV for isolating the release. This resulted in an additional delay because the team had to exit the room and contact the TSC for further instructions.

3. The team was told to go back into room and actually attempt to stop the release. However, another delay occurred because by the time the team went to re-enter the room, the dose rates had escalated to a level resulting in the need for an approval for an annual dose extension. The team had to report back to the TSC.

4. It took approximately 30-60 minutes for the team to receive approval for a dose extension and by the time they reported back to the room for closing the valve, the dose rates had escalated to a harmful level resulting in the team not being able to enter the room and attempting to complete the task.

Analysis

The inspector used the guidance of Manual Chapter (MC) 0612, Power Reactor Inspection Reports, Appendix B for screening and dispositioning this issue. PPL's failure to identify and critique the inadequate performance of an in-plant repair team, inhibited the licensee from correcting a performance deficiency that potentially would have had significant consequences had this been a real event. Traditional enforcement does not apply because this issue did not have any actual safety consequences or

potential for impacting the NRC's regulatory function and was not the result of any willful violation of NRC requirements or PPL's procedures. The finding was determined to be more than minor because it could be reasonably viewed as a precursor to a significant event in that had this been an actual emergency, emergency workers could have been exposed to a higher radiological dose exposure than necessary and an opportunity to stop an off-site release to the public could have been significantly delayed. The finding is associated with an emergency preparedness cornerstone objective and affected the [E]RO performance cornerstone attribute. Specifically, during the exercise, PPL failed to identify a performance problem associated with a non-risk planning standard (10 CFR 50.47(b)(14) and Appendix E, Section IV.F.2.g). Accordingly, MC 0609, the significant determination process was entered.

In accordance to the Emergency Preparedness SDP, EP Risk Determination Flow Chart, Sheet 1, Second Column, this finding was determined to be of very low safety significance (Green) because the finding was identified during an exercise with simulated activities and is associated with the failure to identify a problem associated with a non-risk significant planning standard as discussed below.

Enforcement

10 CFR 50.47(b)(14) states, in part, that periodic exercises will be conducted to develop and maintain key skills and deficiencies identified as a result of exercises are corrected. In addition, 10 CFR Part 50, Appendix E, Section IV.F.2.g., "Training", states, in part, that all training, including exercises, shall provide for formal critiques in order to identify weak or deficient areas that need correction. Contrary to the above, during an exercise used for training and evaluating emergency response capabilities, the licensee did not identify a performance deficiency associated with the dispatch of an in-plant repair team for stopping an ongoing radiological release. This issue is being treated as a Non-Cited Violation (NCV), consistent with Section VI.A. of the NRC Enforcement Policy. This issue was documented in Condition Report No. 428440. **(NCV 50-387,388/02-11-01)**

1EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

The inspectors conducted an in-office review of licensee submitted changes for the Emergency Plan-related documents received from March 2002 to September 2002 to determine if the changes decreased the effectiveness of the Plan. A thorough review was conducted of documents related to the RSPS whereas a cursory review was conducted for non-RSPS documents.

b. Findings

No findings of significance were identified in this area.

## 4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors reviewed the licensee's procedure for developing the data for the EP PIs which are: (1) Drill and Exercise Performance (DEP), (2) ERO Drill Participation and (3) ANS Reliability. The inspector also reviewed the licensee's drill/exercise reports, training records and ANS testing data for 2002 to verify the accuracy of the reported data. The review was conducted in accordance with NRC Inspection Procedure 71151. The acceptance criteria are 10 CFR 50.9 and NEI 99-02, Revision 2, "Regulation Assessment Performance Indicator Guideline".

b. Findings

No findings of significance were identified in this area.

4OA2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed licensee critique findings documented in 2001 and 2002 drill and exercise reports to determine if significant performance trends exist and to determine the effectiveness of licensee corrective actions based upon ERO performance during the exercise. The inspectors verified that issues identified during this exercise were entered into the licensee's corrective action program and reviewed condition reports related to significant findings from past drill/exercise reports to assess the adequacy of the corrective actions.

b. Findings

No findings of significance were identified.

40A6 Meetings, including Exit

The inspectors presented the inspection results to Mr. Shriver and other members of the licensee's staff at the conclusion of the inspection on October 11, 2002. On October 15, 2002, PPL stated to the NRC resident that they had confirmed with their OSC controller the NRC's observations regarding the inadequate performance of the in-plant repair team and acknowledged the opportunity to identify a significant issue through their critique process was missed.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Susquehanna Electric Steam Station

T. Harpster, General Manager, Plant Support
J. Grisewood, Supervisor, Nuclear Emergency Planning
R. Lengel, Nuclear Emergency Planning
R. Tripolli, Nuclear Regulatory Affairs

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened/Closed

| | |
|---|---|
| NCV 50-387/02-011-01 | Failure to identify performance deficiencies by an in-plant repair team. |

Discussed

None

LIST OF ACRONYMS

| | |
|---|---|
| ANS | Alert and Notification System |
| DEP | Drill and Exercise Performance |
| EOF | Emergency Operations Facility |
| EP | Emergency Preparedness |
| ERO | Emergency Response Organization |
| MSIV | Main Steam Isolation Valve |
| OSC | Operations Support Center |
| PAR | Protective Action Recommendation |
| PI | Performance Indicator |
| RSPS | Risk Significant Planning Standard |
| SDP | Significant Determination Process |
| TSC | Technical Support Center |