

March 26, 2004

Mr. Bryce L. Shriver
Senior Vice President and
Chief Nuclear Officer
PPL Susquehanna, LLC
769 Salem Blvd., NUCSB3
Berwick, PA 18603-0467

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION - NRC PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000387/2004006 AND 05000388/2004006

Dear Mr. Shriver:

On February 13, 2004, the US Nuclear Regulatory Commission (NRC) completed a team inspection at your Susquehanna Steam Electric Station Units 1 and 2. The enclosed inspection report presents the results of that inspection, which was discussed with you and other members of your staff on February 13, 2004.

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

On the basis of the sample selected for review, the team concluded that in general, problems were properly identified, evaluated, and corrected. However, the team's findings supported the conclusion in the Annual Assessment Letter (NRC Inspection Report 50-387/2004-01) of the existence of a substantive cross cutting issue in the problem identification and resolution area. There was one Green finding identified during this inspection associated with a weak evaluation and ineffective corrective actions for a lubricating oil foaming condition on the 'D' core spray pump motors for both units. This condition led to the inoperability of these safety related pumps, thereby affecting the mitigating systems reactor safety cornerstone. This finding was determined to be a violation of NRC requirements. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating this finding 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 U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Susquehanna Steam Electric Station.

In addition, some examples of minor problems were identified by the team that your staff entered into the corrective action program. Some of these items involved corrective actions

that were ineffectively tracked or had not been implemented. None of these minor deficiencies resulted in a challenge to system operability or reliability.

In accordance with 10CFR2.790 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 the 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 you have any questions please contact me at 610-337-5282.

Sincerely,

/RA/

Raymond K. Lorson, Chief
Performance Evaluation Branch
Division of Reactor Safety

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

Enclosure: Inspection Report 05000387/2004006, 05000388/2004006
w/Attachment: Supplemental Information

cc w/encl:

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Mr. Bryce L. Shriver

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DATE	03/18/04	03/19/04	03/23/04	03/26/04	03/ /04

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos: 50-387, 50-388

License Nos: NPF-14, NPF-22

Report No: 05000387/2004006, 05000388/2004006

Licensee: PPL Susquehanna, LLC

Facility: Susquehanna Steam Electric Station

Location: 769 Salem Boulevard
Berwick, PA 18603

Dates: January 26 to February 13, 2004

Inspectors: B. Welling, Team Leader
F. Jaxheimer, Resident Inspector
J. Laughlin, Operations Engineer
B. Bickett, Reactor Inspector
A. Lohmeier, Reactor Inspector

Approved by: Raymond K. Lorson, Chief
Performance Evaluation Branch
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000387/2004-006, 05000388/2004-006; 01/26/04 - 02/13/04; Susquehanna Steam Electric Station, Units 1 and 2; biennial baseline inspection of the identification and resolution of problems. One finding was identified in the area of corrective actions.

This inspection was conducted by three regional inspectors and two resident inspectors. One finding of very low safety significance (Green) was identified during this inspection and was classified as a non-cited violation. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process (SDP)." Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

Identification and Resolution of Problems

The team determined that, in general, Susquehanna Steam Electric Station properly identified, evaluated and corrected problems. However, the team's findings supported the conclusion in the Annual Assessment Letter (NRC Inspection Report 50-387/2004-01) of the existence of a substantive cross cutting issue in the problem identification and resolution area. The team identified one finding that indicated deficiencies with the evaluation of issues and the effectiveness of corrective actions. Susquehanna was generally effective at identifying problems and placing them in the corrective action program. These items were screened and prioritized using established criteria, but some potentially risk-significant issues were not fully evaluated. Corrective actions were implemented in a timely manner, but some actions were not completed in a comprehensive manner or were not tracked appropriately. The team determined that workers utilized the corrective action program to address problems.

Cornerstone: Mitigating Systems

- Green. A non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified because PPL did not adequately evaluate and promptly correct a condition adverse to quality associated with foaming of lubricating oil on the 'D' core spray pump motors for both Units 1 and 2.

This issue is greater than minor because the 'D' core spray pump was allowed to remain in service with a degraded condition that rendered it inoperable. Thus, the finding affected the Mitigating Systems cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. This finding is of very low safety significance, based on a Phase 2 significance determination process evaluation, because only one core spray train of the low pressure injection function on each unit was affected by this condition. (Section 40A2b)

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed the procedures describing the corrective action program at PPL's Susquehanna Steam Electric Station. Susquehanna identifies problems by initiating action requests, which become condition reports (CRs) if they involve conditions adverse to quality, plant equipment deficiencies, industrial or radiological safety concerns, or other significant issues. Condition reports are subsequently screened for operability, categorized by significance level (1 through 3) and evaluation type (e.g., root cause, apparent cause), and assigned to personnel for evaluation and resolution. The inspectors observed daily meetings in which licensee personnel screened incoming action requests and condition reports.

The inspectors reviewed items selected across the seven cornerstones of safety in the NRC Reactor Oversight Program to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. The inspectors selected a sample of CRs that had been issued following the last NRC Problem Identification and Resolution inspection that was completed in February 2002. The inspectors also reviewed a sample of risk significant CRs that dated from January 1999 to January 2002. The inspectors reviewed licensee audits and self-assessments, including a recently issued audit of the corrective action program. The effectiveness of the audits and assessments was evaluated by comparing the audit and assessment results against self-revealing and NRC-identified findings.

For selected risk significant systems, the inspectors reviewed applicable system health reports, work requests, engineering documents, plant log entries, and results from surveillance tests and maintenance tasks. For these selected systems, the inspectors also interviewed the cognizant station personnel and walked down portions of these systems.

The inspectors also reviewed operator logs, control room deficiencies, operator work-arounds, and procedures. In addition, plant staff and management were interviewed to determine their understanding of and involvement with the corrective action program. The specific documents reviewed and referenced during the inspection are listed in the attachment to this report.

(2) Observations and Findings

No findings of significance were identified.

The inspectors concluded that the station was generally effective at problem identification. The station staff identified problems and entered them into the corrective action program at the appropriate threshold. There were relatively few deficiencies identified by the team that had not been previously identified by PPL. Station staff promptly identified CRs, as appropriate, in response to inspection team identified deficiencies or issues. The CRs that were generated in response to the inspectors' activities are listed in the attachment to this report.

Examples of minor deficiencies identified by the team included:

- The inspectors identified that when the Unit 1 high pressure coolant injection (HPCI) system was inoperable for 12 days (September 5-17, 2003) due to a problem with the full flow test valve, PPL did not write a condition report to evaluate missed opportunities to identify the problem earlier in the troubleshooting effort.
- The inspectors identified a difference between the timeliness of expected operator actions for an anticipated transient without scram (ATWS) event as described in the station's probabilistic risk assessment and that documented in emergency operating procedures.

The team found that self-assessments and audits were self-critical and generally consistent with the team's observations.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed the CRs listed in the attachment to this report to assess whether PPL adequately prioritized and evaluated problems. The team selected the CRs in areas to cover the seven cornerstones of safety in the NRC Reactor Oversight Program. The team also considered risk insights from the Susquehanna probabilistic risk assessment to focus the inspection sample. The reviews included the appropriateness of the assigned significance level, the timeliness of resolutions, and the scope and depth of the causal analysis. For significant conditions adverse to quality, the inspectors reviewed the licensee's assessment of the extent of condition and the determination of corrective actions to preclude recurrence.

In addition, the inspectors selected a sample of CRs associated with previous NRC non-cited violations (NCVs) to determine whether the licensee evaluated and resolved problems associated with compliance to applicable regulatory requirements. The inspectors reviewed PPL's evaluation of industry operating experience information for applicability to Susquehanna. The inspectors also reviewed PPL's assessment of equipment operability, reportability requirements, and extent of condition.

(2) Observations and Findings

The inspectors concluded that, in general, PPL screened and evaluated problems contained within the CR process at the correct significance level. The staff was generally effective at classifying and performing operability evaluations and reportability determinations for discrepant conditions. However, there were some instances in the screening and initial evaluation phases for CRs involving potentially risk-significant conditions, in which the station did not fully evaluate such factors as potential risk, uncertainty, and common cause implications. As a result, the priority and timeliness assigned to corrective actions were not always commensurate with the significance of the issues.

The inspectors noted the following examples of less-than-thorough evaluations. These were of minor significance with the exception of the first item below:

- Engineers did not fully evaluate the potential impact of oil foaming conditions on the 'D' core spray pump motors. This oversight led to incomplete follow-up actions and deferral of corrective actions (discussed in the finding below).
- The evaluation of a configuration control problem affecting two risk significant, safety-related battery chargers was narrowly focused. The evaluation addressed the replacement of the components, but did not fully evaluate the impact of this degraded condition. The evaluation also did not attempt to determine why the wrong components were installed and whether the wrong components could be installed on other battery chargers in the future. (CR 458959)
- The evaluation of simulator fidelity issues after the April 2002 recirculation pump trip at low power did not fully evaluate the reasons why the simulator recirculation flow did not replicate the plant flow for low power/low flow conditions. Condition report 548260 was written to further evaluate the extent of condition with regard to simulator fidelity.
- Susquehanna's evaluation of risk for technical issues related to control room habitability (CR 481499) was incomplete. Station personnel stated that the control room envelope integrity was not risk significant but did not address the operator protection function provided by the control room envelope.

The inspectors observed that the classification of action requests (ARs) was sometimes inconsistent. For example, two ARs that documented the venting of air from residual

heat removal system piping were classified differently. Also, the levels of classification for these ARs did not assure that a required engineering analysis would be performed.

The inspectors reviewed several root cause evaluations and found that those written after a new procedure was issued in October 2002 were typically thorough. For example, the team noted that a root cause evaluation for smoking insulation on a feed pump in 2001 was narrowly focused and did not fully explore the extent of condition. In contrast, the root cause determination (CR 508017) for a fire in the vicinity of a feed pump in 2003 was detailed and self-critical. This evaluation appropriately identified missed opportunities from the first feed pump event that could have prevented the second event.

Oil Foaming on Core Spray Pump Motors

Introduction. A Green, non-cited violation (NCV) was identified because PPL did not adequately evaluate and promptly correct a condition adverse to quality associated with foaming of lubricating oil on the 'D' core spray pump motors for both Units 1 & 2.

Description. The inspectors identified that PPL did not fully evaluate and correct a condition that caused lubricating oil foaming on the Unit 1 & 2 'D' core spray pump motors (1P206D/2P206D) during quarterly surveillance test runs in July 2003. During the surveillance tests, PPL identified oil foaming in the sightglasses of the two core spray pump motors. Station personnel noted that oil foaming of this severity, in the upper bearing reservoirs of these pump motors, had not been previously seen. Operators initiated condition reports to document these deficient conditions.

Susquehanna's corrective actions included the initiation of work orders to inspect the upper oil reservoirs and to change the oil before the next quarterly surveillance test runs. At that time, PPL's evaluation attributed the cause of the foaming to minor air entrainment. No further evaluation to understand the extent or severity of the oil foaming or potential common cause aspects was performed during the July 2003 time period.

Susquehanna then deferred the corrective actions to inspect the oil reservoirs and change the oil until January 2004 due to other station activities. On October 21 & 23, 2003, during quarterly surveillance testing, the 'D' core spray pump motors for both units experienced more severe foaming that caused the sightglass oil levels to visibly drop below the minimum allowable level, rendering both pumps (i.e one pump at each unit) inoperable.

Following the October 2003 test events, PPL determined that the foaming condition was caused by contamination due to the mixing of oil with different characteristics. Prior to July 2003, PPL had replaced the type of oil used in the pump motors, but at that time did not fully understand the incompatibility between the existing and replacement oil. The inspectors reviewed selected corrective actions following the October 2003 test events and identified no concerns with those actions, including extent-of-condition assessments for other pump motors. The inspectors also requested engineering to provide an

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assessment of the time frame that the core spray pumps were unavailable. Engineering personnel stated that the pumps were likely unavailable from July to October 2003. No maintenance had been performed on these core spray pumps between the July and October surveillance runs. There had only been an addition of oil to the pumps after the July surveillance to replace oil lost due to sampling evolutions.

Analysis. The inspectors determined that the performance deficiency was PPL's failure to correct a condition adverse to quality associated with oil foaming in the 'D' core spray pump motor of each unit, following surveillance test runs in July 2003. Consequently, when the pumps were run in October 2003, the oil foaming condition caused PPL to declare the pumps inoperable. Traditional enforcement does not apply because the 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 procedures. This issue is greater than minor because each unit's 'D' core spray pump was allowed to remain in service with a degraded condition that rendered it inoperable. Thus, the finding affected the Mitigating Systems cornerstone objective.

This finding was assessed in accordance with NRC Manual Chapter 0609, Appendix A, Attachment 1, "Significance Determination Process (SDP) for Reactor Inspection Findings for At-Power Situations," and was determined to be of very low safety significance (Green) based on a Phase 2 analysis. The inspectors determined that this condition represented an actual loss of the low pressure injection (LPI) safety function of the 'B' Train of the two train core spray system for greater than its Technical Specification Allowed Outage Time (7 days) because the 'D' core spray pump, for each unit, was unavailable for three months. Thus, the inspectors entered Phase 2 of the SDP using the applicable worksheets in the "Risk-Informed Inspection Notebook for Susquehanna," Rev. 1. Given the inoperability of the 'B' Train of core spray to perform its safety function, due to the oil foaming condition on the 'D' core spray pump, the chance of a core spray system failure was assumed to increase from 1 in 1000 (a multi-train system) to 1 in 100 of (a single train system). The duration of the condition was assumed to be from July 2003 until October 2003 or greater than 30 days.

The dominant core damage sequences included the frequency of a transient with loss of power conversion system (TPCS) or a stuck open safety relief valve (SORV), each followed by the probability of: failure of the high pressure injection function (HPI), successful reactor depressurization, and failure of the low pressure injection function (LPI). The remaining mitigation capability for both sequences included the unaffected sources of low pressure injection (residual heat removal system and the 'A' Train of the core spray system). The Phase 2 SDP analysis resulted in a finding that was of very low safety significance (Green) and below the risk at which external events or Large Early Release Frequency needed to be addressed.

Enforcement. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, PPL failed to promptly correct a condition that caused lubricating oil foaming in the 'D' core spray pump motor of each unit in July 2003. Consequently, during surveillance test runs in October 2003, the oil

foaming condition rendered the pumps inoperable and unavailable. Because the violation is of very low safety significance and has been entered into the corrective action program (CR 546574), it is being treated as a non-cited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. **(NCV 05000387, 388/2004006-01)**

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The team reviewed the corrective actions associated with selected condition reports to determine whether the actions addressed the identified causes of the problems. The team reviewed CRs for repetitive problems to determine whether previous corrective actions were effective. The team also reviewed the licensee's timeliness in implementing corrective actions and their effectiveness in precluding recurrence of significant conditions adverse to quality. Furthermore, the team assessed the backlog of corrective actions to determine if any, individually or collectively, represented an increased risk due to delays in implementation. The team also reviewed non-cited violations issued since the last inspection of the licensee's corrective action program to determine if issues placed in the program had been properly evaluated and corrected.

(2) Observations and Findings

No findings of significance were identified.

Overall, the team concluded the licensee developed and implemented corrective actions that appeared reasonable to address the identified problems. Based on the sample reviewed, the team determined that, in general, corrective actions were completed in a timely manner. However, the team observed some instances in which corrective actions were not completed in a comprehensive manner or were not tracked appropriately.

Examples of minor issues in this area included:

- The inspectors identified that despite a detailed root cause evaluation for the September 2003 Unit 1'B' reactor feed pump fire, one of the corrective actions was inadvertently omitted and not assigned a condition report action (CRA) number. (CR 544811)
- The station identified that some corrective actions for the NRC's Substantive Crosscutting Issue - Human Performance, documented in the 2002 Annual Assessment Letter, were not being tracked appropriately to assure completion. (CR 543290)
- Corrective actions for an interruptible power supply problem had been delayed for several months, resulting in overdue preventive maintenance and potentially increasing the risk of an initiating event. (CR 425608)

The team also noted that the station had self-identified several examples of condition reports in which some corrective actions had not been completed. In response, the station had recently revised the corrective action program procedure to improve accountability for the effectiveness of corrective actions. However, because this was a recent change, the team could not yet assess the impact of this action.

The team noted some instances in which corrective actions for previous events did not prevent recurrence because the actions were ineffective, or the actions were delayed or postponed. Examples included:

- Delays in correcting hardware problems on high radiation doors (CR 347918), due to a low priority assigned to the repairs, was a causal factor for an unlocked high radiation area door found on September 3, 2003. (Minor issue - CR 506164)
- The deferral of corrective actions for the core spray pump motor oil foaming condition documented above led to the recurrence of foaming and unavailability of 2 core spray pumps. (Refer to finding in Section 4OA2b)
- Corrective actions for problems involved with lifting certain wiring configurations (termed "daisy chain neutrals"), during maintenance or modifications, did not prevent recurrence. As documented in CR 383654, the removal of a daisy chain neutral damaged a control room chiller. (Minor issue)

4OA6 Meetings, including Exit

The team presented the inspection results to Mr. Bryce Shriver, Senior Vice President and Chief Nuclear Officer, and other members of the Susquehanna staff on February 13, 2004. No proprietary information was retained by the team.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

R. Anderson	Vice President, Nuclear Operations
D. Coffin	Senior Assessor, Quality Assurance
D. Glassic	Manager, Work Control Systems
T. Harpster	General Manager, Plant Support
T. Kirwin	General Manager, Maintenance
J. Meter	Regulatory Affairs Engineer
B. O'Rourke	Regulatory Affairs Engineer
R. Pagodin	Manager, Design Engineering
G. Ruppert	Manager, Nuclear Operations
M. Rochester	Employee Concerns Program Site Representative
D. Roth	Manager, Quality Assurance
R. Saccone	General Manager, Nuclear Engineering
B. Shriver	Senior Vice President and Chief Nuclear Officer
W. Smith	Manager, Corrective Actions and Assessment
A. Wrape	General Manager, Nuclear Assurance

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Opened and Closed

05000387, 388/2004006-01	NCV	Susquehanna did not promptly correct a condition adverse to quality associated with foaming of lubricating oil on the 'D' core spray pump motors for both Units 1 and 2.
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Closed

None

LIST OF DOCUMENTS REVIEWED

Condition Reports

269440	411290	453609	506771	541034
292918	411291	456630	507152	541756
325995	414349	457151	508017	542808*
333197	415748	458959	508269	542882*
375987	416011	459856	508339	543290*
377452	421711	460227	510260	543796*
380489	423974	460232	510950	543857*
382316	424215	461715	516897	543863*
382318	425033	463226	517302	544179*
383654	425206	463946	517898	544181*
384529	425608	466074	518015	544296*
385206	425938	466261	519179	544629
388933	426454	466682	519954	544811*
389091	426796	467829	522641	544894*
389288	427044	471696	527059	545281*
389580	428348	472575	529416	545457*
390276	428440	473467	529430	545459*
391355	428561	475419	529650	545986*
391452	431795	476696	533024	546200*
392432	432230	477146	533717	546216*
393405	433086	478242	534130	546574*
393490	435052	479344	534140	546601*
394526	436426	481499	534141	547938*
394783	438372	483929	535331	547955*
395420	439943	483983	535347	548025*
397090	443369	486838	536101	548260*
398663	445828	486911	536676	548434*
399089	446235	487998	536791	548869*
399682	446654	489014	539012	549077*
402205	449208	489015	539019	549274*
402961	449281	498084	540069	96-2026
405711	450278	506164	540632	

* Indicates condition reports issued as a result of NRC inspection activities

Procedures

EO-000-113	Level/Power Control, Rev. 1
NDAP-00-0109	Employee Concerns Program, Rev. 7
NDAP-QA-0206	Replacement Item Evaluations, Rev. 4
NDAP-QA-0413	Maintenance Rule Program, Rev. 6
NDAP-QA-0482	Post Maintenance Testing, Rev. 4
NDAP-QA-0524	Equipment Reliability Process, Rev. 2
NDAP-QA-0702	Action Request and Condition Report Process, Rev. 12
NDAP-QA-0703	Operability Assessments & Requests for Enforcement Discretion, Rev. 5
NDAP-00-0708	Corrective Action Review Board, Rev. 1
NDAP-QA-0725	Operating Experience Review Program, Rev. 6
NDAP-00-0745	Self-Assessment and Benchmarking Program, Rev. 3
NDAP-00-0752	Root Cause Analysis, Rev. 0
OESI-AD-001	Action Request Process - Subtype Condition Report (CR) and Management (MGMT) Processing
ON-125-001	Loss of Containment Instrument Gas, Rev. 9
OP-125-001	Containment Instrument Gas System, Rev. 20
PSP-29	Post Maintenance Testing Matrix, Rev. 0
SO-054-002	Quarterly ESW Valve Exercising, Rev. 16

Non-Cited Violations and Findings

2002-02-01	Common safety system loads were not transferred to Unit 2 125V DC control power as required by procedure
2002-02-02	Control room emergency outside air supply inoperable due to Unit 1 emergency bus breakers not seismically restrained while in the racked-out position
2002-03-02	Written procedures were not maintained to provide plant operators with clear direction in response to a single recirculation pump trip at low power
2002-05-01	Failure to maintain adequate shift coverage without heavy use of overtime
2002-06-03	PPL did not adequately implement emergency plan procedures for event classification during an actual event
2002-06-04	PPL did not implement emergency plan procedures to use a trained individual for control room communicator during an actual event
2003-03-01	PPL did not properly implement written procedures for post-maintenance testing of a standby gas treatment system damper
2003-04-01	Plant control operator did not implement feed pump test procedure and cause feed pump trip
2003-04-02	'D' emergency diesel generator bolt failure - cause not determined prior to service

Quality Assurance Audits and Self-Assessments

NQA Audit 2001-010, "Corrective Action Program"
 NQA Audit 435284, "Corrective Action"
 NQA Audit 435280, "Procurement and Materials Control"
 CAA Trend Report, Rev. 2, July 2003
 CAA Trend Report, CR Action and Action Taken Assessment Rev. 1
 CAA Trend Report, Rev. 1, February 2003
 OPS-02-17, Initial Licensed/Non-Licensed Operator Program
 OPS-03-01, Effectiveness of Error Prevention, August 2003
 NEP-02-01, SSES Drill and Exercise Performance Trend
 NEP-03-03, Review of Emergency Planning Performance Standards
 MNT-03-03, FIN Team Self Assessment, October 2003

Operating Experience

420962 Review of NRC Information Notice 2002-25, "Challenges to Licensee's Ability to Provide Prompt Public Notification and Information During An Emergency Preparedness Event"
 447951 Review of NRC Information Notice 2003-01, "Failure of a Boiling Water Reactor Target Rock Main Steam Safety/Relief Valve"
 433415 Review of OE14980, "Scram Discharge Volume Drain Valve Stem Coupling Failure"
 507517 Review of GE SIL 644 Supplement 1, "BWR Steam Dryer Integrity"
 539012 Review of NRC IN 03-11, Supplement 1, "Leakage found at bottom-mounted instrument nozzles"
 539019 Review of NRC IN 02-26, Supplement 2, "Additional flow induced vibration failures after a recent power uprate"

Other

CAA Screening Aid, Revision 1
 Open Operability Assessment, December 2003
 Operator Workarounds, December 2003
 Lists of Condition Report Actions, January 2004
 List of Action Requests for RHR system July to December 2003
 List of Operation Experience Action Requests, 2002-2003
 Corrective Action Program Training Materials
 Corrective Action Process Review Slides and Self-Assessment Information
 Corrective Action Program Self Assessment
 Plant Control Operator Narrative Logs
 GE Letter 444-JXBWG-DR1 "Core Spray Pump Motor Minimum Oil Level" Rev. 1
 1D Core Spray Risk Assessment, 2/12/2004
 LER 50-387/2003-007-00 - Common Cause Inoperability of Core Spray Pumps, 12/19/2003
 RIE No. 97-0180, "Replace Gulf Harmony 32AW with Gulfcrest 32 Lubricant" 12/97
 System Health Reports - 120VAC Instrument AC
 Battery Charger Surveillance Test documents
 EC-030-1018, Rev 0. Response to NEI 99-03 "Control Room Habitability Guidance"; Appendix

A "Smoke Evaluation"
 EC-054-0511, Determine if Sufficient Cooling can be provided to the Diesel Generator Coolers and Associated Safety Related Coolers in the ESW System with One ESW pump in Service.
 LER 00-010, Operation of Control Room Smoke Removal Fans Causes Both Trains of Control Room Emergency Outside Air Supply to be inoperable.
 WR 329234, ESW valve isolation capacity
 Tech Spec Basis B 3.7.3, Control Room Emergency Outside Air Supply (CREOAS) System
 Drawing E106256, sheets 1 through 5, P&ID Residual Heat Removal
 FSAR Chapter 6.4 Habitability Systems
 System Engineer Journal Reports.
 DE-03-03, SSES Flow Accelerated Corrosion Assessment of PPL to control FAC at SSES

LIST OF ACRONYMS

AR	Action Request
ATWS	Anticipated Transient Without Scram
CFR	Code of Federal Regulations
CR	Condition Report
CRA	Condition Report Action
ESW	Emergency Service Water
EWR	Engineering Work Request
FSAR	[SSES] Final Safety Analysis Report
GE	General Electric
HPCI	High Pressure Coolant Injection
LER	Licensee Event Report
NCV	Non-cited Violation
NQA	Nuclear Quality Assurance
NRC	Nuclear Regulatory Commission
OE	Operating Experience
PI&R	Problem Identification and Resolution
PPL	PPL Susquehanna, LLC
QA	Quality Assurance
RHR	Residual Heat Removal
SIL	Service Information Letter
SDP	Significant Determination Process
SSES	Susquehanna Steam Electric Station
TS	Technical Specification