

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9708110243 DOC. DATE: 97/08/06 NOTARIZED: NO DOCKET #
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylva 05000387
 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylva 05000388
 AUTH. NAME AUTHOR AFFILIATION
 YRAM, R.G. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 970623 ltr re violations noted in insp repts
 50-387/97-03 & 50-388/97-03. Corrective actions: revised
 procedures OP-ORF-005, OP-ORF-001 & OP-181-001 & trained
 refueling operators re movement of single blade guides.

DISTRIBUTION CODE: IE01D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 9
 TITLE: General (50 Dkt)-Insp Rept/Notice of Violation Response

NOTES: 05000387

| | RECIPIENT | | COPIES | | | RECIPIENT | | COPIES | |
|-----------|------------------|---------|--------|---|--|-----------------|--|--------|---|
| | ID CODE/NAME | | L | T | | ID CODE/NAME | | L | T |
| | PD1-2 | PD | 1 | 1 | | POSLUSNY, C | | 1 | 1 |
| INTERNAL: | ACRS | | 2 | 2 | | AEOD/SPD/RAB | | 1 | 1 |
| | AEOD/ATC | | 1 | 1 | | DEDRO | | 1 | 1 |
| | FILE CENTER | | 1 | 1 | | NRR/DISP/PIPB | | 1 | 1 |
| | NRR/DRCH/HHFB | | 1 | 1 | | NRR/DRPM/PECB | | 1 | 1 |
| | NRR/DRPM/PERB | | 1 | 1 | | NUDOCS-ABSTRACT | | 1 | 1 |
| | OE DIR | | 1 | 1 | | OGC/HDS2 | | 1 | 1 |
| | RGNI | FILE 01 | 1 | 1 | | | | | |
| EXTERNAL: | LITCO BRYCE, J H | | 1 | 1 | | NOAC | | 1 | 1 |
| | NRC PDR | | 1 | 1 | | NUDOCS FULLTEXT | | 1 | 1 |
| NOTES: | | | 1 | 1 | | | | | |

C
A
T
E
G
O
R
Y
1
D
O
C
U
M
E
N
T

NOTE TO ALL "RIDS" RECIPIENTS:
 PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM OWFN SD-5 (EXT. 415-2083) TO ELIMINATE YOUR NAME FROM
 DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTR 21 ENCL 21



Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101-1179 • 610/774-5151

Robert G. Byram
Senior Vice President
Generation and Chief Nuclear Officer
610/774-7502
Fax: 610/774-5019

AUG 06 1997

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop P1-137
Washington, D. C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
REPLY TO A NOTICE OF VIOLATION
(50-387/97-03-01, 50-388/97-03-01; 50-387/97-03-02 AND
50-387/97-03-04, 50/388/97-03-04)
PLA-4644 FILE R41-2

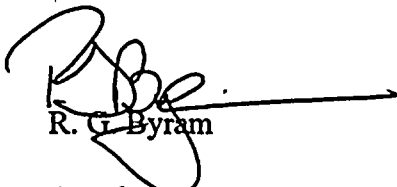
Docket Nos. 50-387
and 50-388

This letter provides Pennsylvania Power and Light Company's response to the Notice of Violation (50-387/97-03-01, 50-388/97-03-01; 50-387/97-03-02 and 50-387/97-03-04, 50-388/97-03-04) contained in NRC Integrated Inspection Report 50-387/97-03 and 50-388/97-03 dated June 23, 1997.

The notice requires submittal of a written reply within thirty (30) days of the date of the letter. However, as discussed with Mr. P.D. Swetland of NRC Region I on July 22, 1997, PP&L has been authorized to delay the response until August 6, 1997. We trust that the Commission will find the attached response acceptable.

If you have additional questions, please contact Mr. R. D. Kichline at (610) 774-7705.

Very truly yours,


R. G. Byram

Attachment



copy: NRC Region I
Mr. K. Jenison, NRC Sr. Resident Inspector
Mr. C. Poslusny, Jr., NRC Sr. Project Manager

1/1
Iep1

110077

9708110243 970806
PDR ADOCK 05000387
G PDR

REPLY TO A NOTICE OF VIOLATION**Violation 1 (387/97-03-01; 388/97-03-01)**

- 1a. Technical Specification (TS) 6.8.2 requires that written procedures shall be established and implemented for applicable procedures recommended in Appendix 'A' of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix 'A,' item 1.1, requires procedures for refueling operations. Operating Procedure, OP-ORF-005, Refueling Operations, was established by the licensee to control the movement of fuel assemblies and blade guides in and around the reactor pressure vessel.

Contrary to the above, Susquehanna operating procedure, OP-ORF-005, Refueling Operations, was inadequate in that it did not clearly control the movement of single blade guides. Precautions at the beginning of the procedure disagreed with instructions in the body of the procedure. As a result of this inconsistency, refueling operators moved single blade guides in the automatic/semi automatic mode and a single blade guide impacted the Unit 2 reactor pressure vessel flange cover.

- 1b. Technical Specification (TS) 6.8.1 requires that written procedures shall be established and implemented for applicable procedures recommended in Appendix 'A' of regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33 Appendix 'A,' item 5 requires procedures for emergencies and item 6 requires procedures for abnormal, offnormal or alarm conditions. Item 6 states that the procedures for off normal conditions should include immediate operator action. SSES Alarm Response Procedure AR-015-D4, Stack Monitoring System Hi Hi Radiation, establishes the expected operator response to a Hi Hi System Particulate Iodine Noble Gas alarm.

Contrary to the above, alarm response procedure AR-015-D4, Stack Monitoring System Hi Hi Radiation, was inadequate in that substep 2.2.1b requires the operator to notify chemistry to confirm the validity of a System Particulate Iodine Noble Gas alarm. This action which could take up to two hours did not agree with a procedural requirement of the Emergency Plan.

Section 5.0 of the SSES Emergency Plan states that an Unusual Event should be declared as soon as it has been indicated and verified. However, it sets the parameters of the time expected to verify the need for an Unusual Event by stating that all reasonable efforts are implemented to make this verification within fifteen minutes of the initial indication of the event. The AR procedure limited the operator to a validation process which could take up to two hours before directing him to the Emergency Plan. Therefore, the AR did not contain reasonable validation criteria, and it did not agree with and delayed entry into the Emergency Plan.

Response

1. Reason for the Violation

- 1a. The procedural discrepancies identified in the violation resulted from the failure to fully revise all affected procedures and procedure sections regarding the restrictions on single blade guide movements. The possibility of a single blade guide striking the flange protector in the Semi-Automatic or Automatic mode was identified during the Unit 1 9th refueling and inspection outage in the fall of 1996, during reviews associated with installation of the new refueling bridge. As a result, Step 8.4.1.g in the body of procedure OP-ORF-005 was revised to prohibit the movement of single blade guides while in the semi-automatic or automatic modes. However, step 6.3 (precautions) of the procedure was inadvertently overlooked when revising step 8.4.1.g to prohibit movement of single blade guides while in the semi-automatic or automatic modes.
- 1b. Alarm response procedure AR-015-001 alarm response (D04) "Stack Monitoring - Hi-Hi Radiation" required that the alarm be validated by obtaining analytical results through counting of the vent stack monitor canister. This action can take up to two hours to perform. In the event in question, the Shift Supervisor recognized the implication for potential entry into the Emergency Plan, and made an appropriate, timely, conservative judgment based upon his knowledge and experience. He made this judgment even though the procedure he was using did not contain specific guidance to support initial validation of the alarm commensurate with Emergency Plan objectives. This lack of guidance was an oversight in the development of the procedure.

2. Corrective Steps Which Have Been Taken and the Results Achieved

- 1a. 1) The following procedures have been revised to provide proper and consistent restrictions on moving single blade guides:
 - OP-ORF-005 Refueling Operations
 - OP-ORF-001 Movement of Blade Guides Within and Between Fuel Pools
 - OP-181-001 Refueling Platform Operations
- 1a. 2) Refueling operators have been trained regarding expectations when moving single blade guides.
- 1b. Alarm response procedure AR-015-001 alarm response D04 has been revised and now requires the operator to review other radiation monitoring instrumentation, including ARM's, linear and log offgas pretreatment radiation monitors, and the main steam line radiation monitors. Guidance has also been added so that the operator can determine if the alarm is a noise-induced anomaly with the vent stack monitor system. If there are no changes in the other radiation monitoring instrumentation and the alarm is determined to be noise-induced, the alarm is considered non-valid. These steps can all be performed from the Control Room and can be completed in a timely manner.



3. Corrective Steps Which Will Be Taken to Avoid Further Violations

- 1a. As the result of going to a two year operating cycle, operators assigned to the refuel platform will be receiving annual training. This training will include a review of all applicable procedures and procedure changes that have occurred since the last outage.

- 1b. 1) Additional reviews are being performed to identify other applicable information that may be available to the operator to assess the validity of the alarm. Items being reviewed include: operating condition of the unit, area radiation monitor indications, status of potential release paths, work activities in progress, etc. Additional information identified will be incorporated into the alarm response procedures, operating procedures, and emergency plan procedures, as appropriate. Procedural revisions associated with this review will be completed by December 15, 1997.

4. Date of Full Compliance

Based on 2 above, PP&L is in full compliance.

Violation 2 (387/97-03-02)

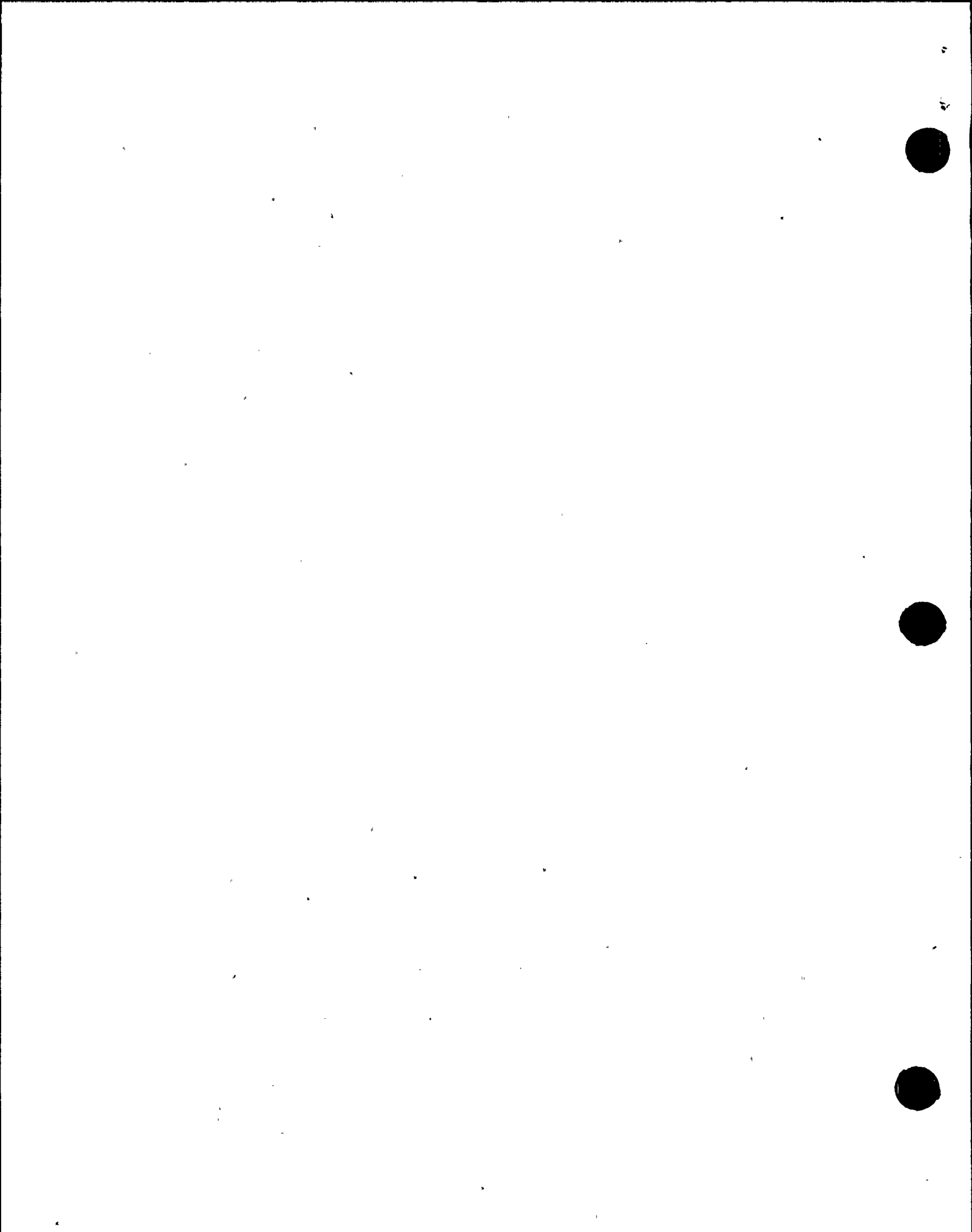
10 CFR Appendix B, Criterion XI, Test Control, requires, in part, that the licensee establish a test program to assure that testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed according to written test procedures that include provisions for suitable environmental conditions.

Contrary to the above, on April 24, 1997, the Unit 1 Core Spray System Division I quarterly surveillance test procedure, SO-151-A02, specified that operators vent the core spray pumps prior to starting them in order to verify operability. This activity resulted in the Core Spray pumps being tested in a condition that was different from the as-found condition, thereby potentially affecting the validity of the surveillance test results.

Response**Basis for Disputing the Violation**

PP&L disputes the violation on the basis that:

- The location and language of the surveillance/procedural steps (SO-151-A02 steps 6.1.4 and 6.1.6) led to the appearance that the procedural steps were considered preconditioning activities, instead of routine system pre-start checks.
- The vent and fill evolutions in question are not performed in an effort to ensure that the surveillance passes. PP&L routinely checks to confirm that the system piping (including pumps) is filled by the process fluid (water) prior to routine starting of the pumps of those systems, including starts associated with surveillance testing. This is done through vent and fill steps which are primarily located in operating procedures. PP&L considers this to be a prudent action supporting safe operation of plant systems; it is performed despite the absence of past experience of air intrusion.
- The surveillance in question was not impacted by the vent and fill evolution. SO-151-A02; Core Spray Division 1 Quarterly Flow Verification, is designed to assess the operational readiness of the Core Spray pumps through various measurements of their performance, both individually and operating as a pair, at steady-state conditions. Therefore, even if necessary, vent and fill activities could not impact the test results of this surveillance.
- Although the procedures do not specify acceptance criteria for the results of vent and fill evolutions, PP&L's practice would be to initiate a Condition Report should an unacceptable level of air be found to be present in the system, since this would constitute an unanticipated condition. In PP&L's view, if it can be shown that no impacts result from performing precautionary system checks prior to a surveillance, then the surveillance is not invalidated by the activity. Conversely, if an unacceptable amount of



air was found in the system, a system operability determination would be made as part of the Condition Report dispositioning process.

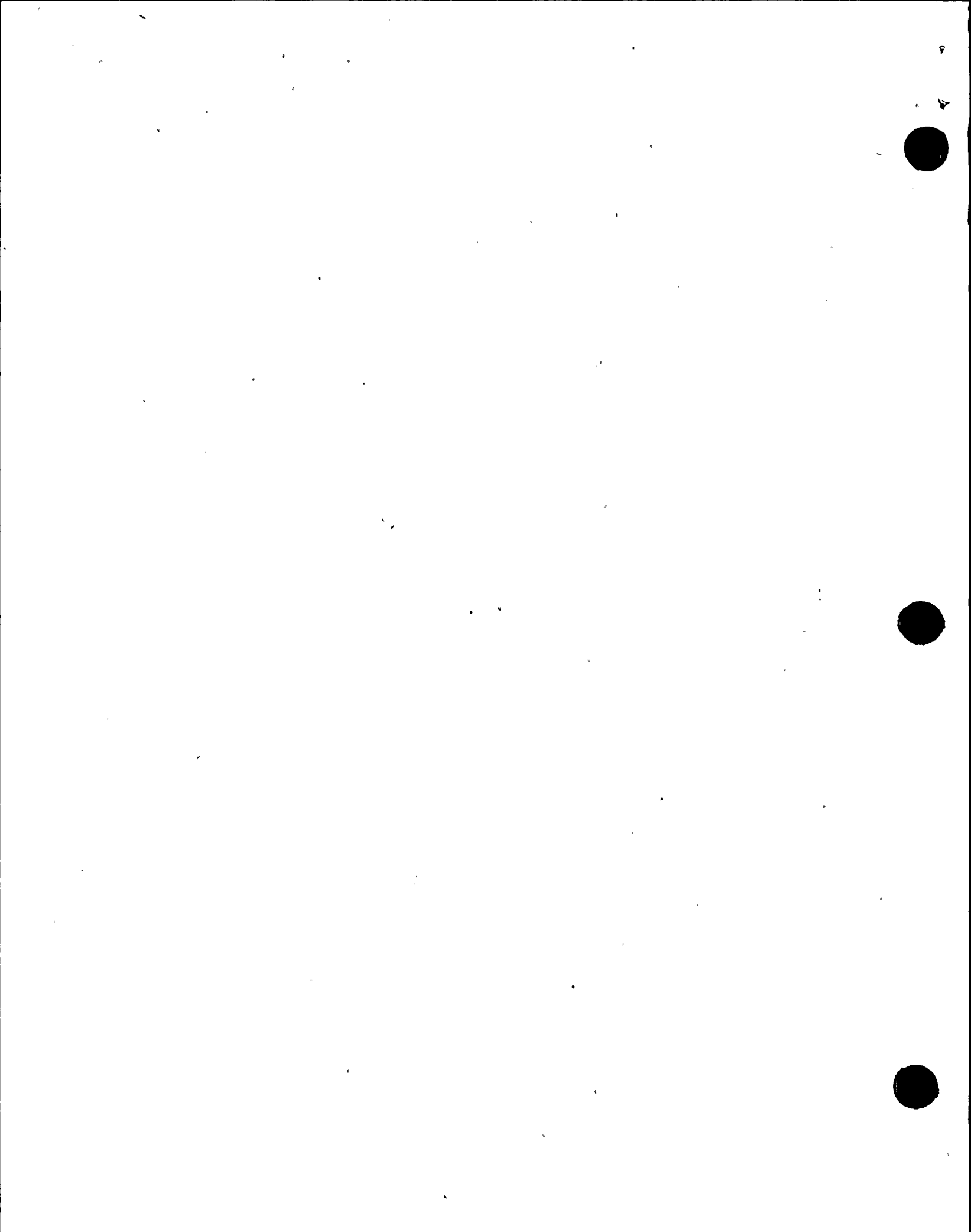
- The ECCS keepfill system utilized at the station is designed to maintain system inventory (water). It is monitored for discharge line pressures and has performed its function well. Recovery from system events have been within reasonable periods, were well controlled and utilized the appropriate off-normal procedure. This system assists in assuring that the Core Spray system inventory remains solid.
- Additionally, Information Notice 97-16, "Preconditioning of Plant Structures, Systems, and Components Before ASME Code Inservice Testing or Technical Specification Surveillance Testing," states in part that "in certain cases, the safety benefit of some preconditioning activities may outweigh the benefits of testing in the as-found condition. For example, the staff has approved the practice of routine checking of EDG cylinders for water accumulation before performing surveillance tests in order to prevent the damage caused by hydrolocking." PP&L performs the vent and fill evolutions for a similar purpose, i.e., to prevent the damage caused by a potential system waterhammer.

Based on the above, the existing surveillance is considered adequate because the vent and fill evolution does not impact the purpose of the surveillance. However, to clarify that vent and fill evolutions are part of the routine system pre-start activities rather than surveillance preconditioning activities, Core Spray System Operating Procedures OP-151-001 and OP-251-001 will be revised to incorporate steps to vent and fill the pumps. Additionally, Core Spray System Flow Verification (IST) Test Procedures SO-151-A02, SO-151-B02, SO-251-A02, and SO-251-B02 will be revised to replace steps 6.1.4 and 6.1.6 with a step to "Check system filled in accordance with OP-151/251-001."

Also, OP-151/251-001 will be evaluated and revised to incorporate appropriate acceptance criteria for the results of vent and fill evolutions, such that Condition Reports are required to be written if unanticipated results are identified. This will provide added assurance that the evolutions cannot impact Surveillance results.

Procedures governing vent and fill evolutions for HPCI, RCIC, and RHR will also be evaluated to determine the need for similar enhancements.

PP&L will complete the above activities prior to December 31, 1997.



Violation 3 (50-387/97-03-04; 388/97-03-04)

10 CFR 50.59 states, in part, that licensees may make changes in the facility as described in the final safety analysis report without prior Commission approval unless the proposed change involves an unreviewed safety question. The licensee shall maintain records of changes in the facility and of changes in procedures made pursuant to this section. These records must include a written safety evaluation which provides the bases for the determination that the change does not involve an unreviewed safety question.

- a. Contrary to the above, on June 21, July 10 and December 9, 1996, PP&L blocked open doors to rooms with high energy line break (HELB) protective features prior to performing a safety evaluation to determine if these changes to the facility constituted an unreviewed safety question.
- b. Contrary to the above, on December 20, 1995, PP&L increased the float voltage for both Unit 1 and Unit 2, 250 Vdc batteries prior to performing a safety evaluation to determine whether the increased voltage would degrade the connected safety-related loads.
- c. Contrary to the above, PP&L installed temporary test equipment on the operable 'A' and 'C' emergency diesel generators in support of surveillances on November 10 and November 20, 1996 [sic] (see note below) respectively, without performing a safety evaluation to determine whether this change to the facility constituted an unreviewed safety question.

(Note: The actual dates that the surveillances were performed on the "A" and "C" emergency diesel generators were November 10 and November 20, 1995, respectively.)

- d. Contrary to the above, on May 5, 1997, PP&L cross connected the normal and backup fire protection systems and the systems have remained in the cross connected condition without first performing a safety evaluation for the proposed change to the facility as described in the Final Safety Analysis Report (FSAR). This constitutes a change to the normal fire protection system which is described in the FSAR and TS 3/4 7.6.

Response

1. Reason for the Violation

- 3a. The failure to write a safety evaluation to block open the noted HELB doors is similar to that for blocking the doors open as described in the "Reply to a Notice of Violation" dated March 3, 1997, for violations 50-387/96-13-01 and 50-388/96-13-01. The violation occurred due to the failure to adequately communicate station guidance that HELB doors must remain closed pending establishment of proper administrative controls on their use. PP&L's response to the events of June 21 and July 10 was focused on the engineering evaluations necessary to establish these controls. These evaluations required that engineering calculations be performed in order for any HELB door to be blocked open at



the station. After the July 10 event, action was taken to provide interim controls by retracting existing guidance pending completion of the engineering work. However, this action was not adequately communicated to affected station personnel; therefore, the door on December 9, 1996, was blocked open without the proper documentation.

- 3b. In response to a 1994 event on Unit 2 concerning the failure of the channel "B" 125 Vdc battery, the 125 Vdc and 250 Vdc overvoltage calculation was revised to increase the float voltage for the 125 Vdc batteries. Although no formal calculation was performed to increase the float voltage for the 250 Vdc batteries, "engineering judgment," based on manufacture's information indicating that the increased float voltage was within the acceptable tolerance, was utilized to determine acceptability. Also, a review of the FSAR indicated that the proposed change was bounded (including the impacts on downstream connected equipment), and therefore the revision did not appear to constitute "a change to the facility as described in the SAR." Although not originally believed to be required, a formal revision to the overvoltage calculation, to address the increase to the 250 Vdc float voltage, was subsequently performed to assure that all aspects associated with increasing the float voltage were addressed. Based on the above, the reason for the violation was the lack of a formal calculation to support the proposed change.
- 3c. The test equipment installed on the diesel generators in November 1995, without a Safety Evaluation being performed, was installed in accordance with the Plant Bypass procedure (NDAP-QA-0484) and Work Authorization procedure (NDAP-QA-0502) in effect at that time. These procedures permitted the installation of temporary test equipment for up to seven days without the need to perform a 50.59 Determination and/or Safety Evaluation.
- 3d. The Licensing basis document (Fire Protection Review Report/FPRR) section 4.1 states in part that the backup fire protection system and the main plant fire protection system can be cross-tied. Therefore, cross-tying the systems did not appear to constitute a change to the facility as described in the SAR, and a safety evaluation was deemed unnecessary. Further investigation identified a 1994 calculation that develops setpoints to coordinate start times for certain pumps in the backup system and also established that the backup system could be operated as an integral part of the main system. However, no explicit explanation is provided in the FPRR or calculation to justify that the systems could be cross-tied if the backup system is inoperable. Based on the above, the reason for this violation was that the SAR did not convey sufficient information to ensure proper configuration management.

2. Corrective Steps Which Have Been Taken and the Results Achieved

- 3a. 1) "Reply to a Notice of Violation" dated March 3, 1997, for violation 50-387/96-13-01 and 50-388/96-13-01 identified the initial actions taken. These actions were: a) Upon identification of the noncompliances on July 10, 1996, and December 9, 1996, the HELB doors were closed, b) Following the event on December 9, 1996, an "all station personnel" letter dated December 12, 1996, was issued. Reading of this letter was required as "stand down" training. Since issuance of the letter, which discussed the control of station doors, no HELB door violations of the station door policy have



been identified, and c) The responsibility for station HELB doors has been consolidated under the site engineering organization. This assignment provides a focal point for control of station doors.

- 2) A station procedure for the control of station doors (NDAP-QA-0409) has been issued. This procedure requires that appropriate evaluations, documentation, and approvals be generated prior to blocking open HELB doors.
 - 3) The control of station doors has been incorporated in General Employee Training (Retraining) to reinforce: 1) the importance of maintaining station doors in their proper configuration, and 2) the importance of using proper controls to change the configuration.
- 3b. The 125 Vdc and 250 Vdc battery overvoltage calculation was revised to address the float voltage increases to the 250 Vdc batteries. The revised calculation, which resolves the design concern, confirmed that there were no adverse impacts to equipment powered by the 250 Vdc batteries with the increased float voltage.
- 3c. The Plant Bypass procedure (NDAP-QA-0484) and Work Authorization procedure (NDAP-QA-0502) have been revised. These procedures now require a 50.59 determination for the installation of temporary test equipment on operating plant equipment. Additionally, the seven day exemption was deleted from the procedures.
- 3d. An evaluation (NL-97-030) was generated to address the lack of documentation necessary to support cross-tying the inoperable backup system to the main fire protection systems. This evaluation confirmed the acceptability for cross-tying the systems when either system is inoperable.

3. Corrective Steps Which Will Be Taken to Avoid Further Violations

A review of department practices associated with 50.59 evaluations is ongoing in response to industry experience. Recommendations that result from this review will be evaluated for implementation to enhance the 50.59 process. Appropriate procedure changes based on this review will be implemented by the fourth quarter of 1997. No additional corrective actions to the specific examples identified in the NOV are necessary to avoid further violations.

4. Date of Full Compliance

Based on 2 above, PP&L is in full compliance.

