



PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

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PEACH BOTTOM--THE POWER OF EXCELLENCE

D. B. Miller, Jr.
Vice President

February 5, 1991

Docket Nos. 50-277
50-278

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

SUBJECT: Peach Bottom Atomic Power Station - Units 2 & 3
Reply to Notice of Violations
(Combined Inspection Report Nos. 50-277/90-22; 50-278/90-22)

Dear Sir,

In response to your letter dated December 28, 1990, which transmitted the Notice of Violations concerning the referenced Inspection Report, we submit the attached responses. The subject Inspection Report concerned a routine resident safety inspection during the period October 30 through December 3, 1990.

If you have any questions or require additional information, please do not hesitate to contact us.

- cc: R. A. Burricelli, Public Service Electric & Gas
- T. M. Gerusky, Commonwealth of Pennsylvania
- J. J. Lyash, USNRC Senior Resident Inspector
- T. T. Martin, Administrator, Region I, USNRC
- H. C. Schwenm, Atlantic Electric
- R. I. McLean, State of Maryland
- J. Urban, Delmarva Power

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REPLY TO NOTICE OF VIOLATION 90-22-01

Restatement of Violation

- A. The Code of Federal Regulations, Title 10, Part 50, Appendix B, Criterion XVI, "Corrective Action," states in part that measures shall be established to assure that conditions adverse to quality, such as defective material and equipment, are promptly identified and corrected.
1. Contrary to the above, on November 5, 1990, a leak was caused and identified in the supply line from the seismically qualified nitrogen supply to the boot seal of inboard primary containment isolation valve AO-2520. Immediate corrective actions were not implemented and the bottle depressurized to zero psig. Since the outboard valve was already inoperable with its boot seal deflated, a potential primary containment leak path would have existed in the event of a design basis accident.
 2. Contrary to the above, on May 3-4, 1990, and since August 29, 1990, primary containment isolation valve AO-2519 was inoperable. Data collected during daily surveillances indicated that leakage in excess of the allowable existed, making the seismically qualified backup nitrogen supply inadequate to assure valve operability. Philadelphia Electric Company did not declare the valve inoperable, and did not initiate action to promptly repair the valve.

This is a Severity Level IV Violation (Supplement I).

Event Description A.1

The valve operator and boot seal of the Containment Isolation Valves are supplied pressure by the Instrument Air System under normal operation. In the event of a loss of instrument air, backup nitrogen (N2) is supplied from compressed gas cylinders to maintain boot seal pressure. For a Design Basis seismic event or loss of offsite power, the normal supply to the valves would be lost, and the boot seals would be supplied by the N2 cylinders to maintain containment integrity.

On November 5, 1990, an operator replacing the compressed nitrogen gas cylinder that supplies backup gas pressure to the AO-2505 valve disturbed the N2 supply line to the AO-2520 valve causing it to leak. The operator made a temporary repair and then immediately notified the Shift Supervisor in the control room that the leak was stopped but would require further maintenance. The Shift Supervisor initiated a Maintenance Request Form which was to be completed the next day.

During the performance of Surveillance Test (ST) 7.9.2-2, "Daily Check of Seismic Gas Supply Bottle Pressures" on November 6, 1990, the N2 cylinder that supplied AO-2520 was discovered empty. An Equipment Trouble Tag was in place at that time identifying the tubing leak. While replacing the cylinder, the Operator noticed that the leak was rapidly bleeding down the gas pressure so he isolated the bottle and notified the Control Room Supervisor who requested immediate maintenance repair. The System Engineer also became involved at this time and noted that the AO-2520 valve was in line with the Outboard AO-2521A valve, which had its boot seal deflated in order to perform maintenance.

An operability determination was then initiated to evaluate the Primary Containment Isolation Capability of the AO-2520 valve. The importance of the backup N2 supply was not well understood and the lack of guidance given in the Technical Specifications delayed the operability determination. A determination was made to declare AO-2520 inoperable for the purpose of the primary containment isolation due to the lack of backup N2 to the boot seal. Technical Specification 3.7.D.2 was entered for an inoperable isolation valve. The N2 tubing on AO-2520 was repaired a short time later, re-establishing the N2 supply and the valve was returned to an operable status. Although a potential containment leak path existed through the boot seals of the inboard and outboard Containment Isolation Valves due to the condition of the backup N2 supply, the boot seal was continually supplied pressure from instrument air. The actual integrity of the boot seal and primary containment was never compromised. During the investigation of the event, it was determined that Tech Spec 3.7.D.2 did not apply since AO-2521A was already considered an inoperable isolation valve due to maintenance activities. It was concluded that Tech Spec 3.7.A.3 involving containment integrity should have been entered. Tech Spec 3.7.A.3 allows 24 hours to re-establish containment integrity, or the reactor must be placed in cold shutdown in the next 24 hours. Tech Spec compliance was

met but there was confusion in determining the appropriate Tech Spec to use.

Event Description A.2

A resident NRC inspector discovered on November 8, 1990, that the bottle pressure for the backup N₂ supply to AO-2519 was less than the acceptable value specified in ST 7.9.2-2. The Shift Supervisor was immediately notified. The bottle was found with a leaking regulator and was replaced. The inspector then reviewed a sample of surveillance test data recorded for AO-2519 since January, 1990, and identified that AO-2519 was inoperable on May 3-4, 1990. Subsequently, additional reviews performed by the System Engineers determined that the valve was inoperable since August 29, 1990. During these periods the leakage rate was such that the seismic backup N₂ supply to AO-2519 would not have provided the required 20 day supply in case of a Design Basis seismic event or loss of offsite power. The 20 day supply requirement was contained in a Justification for Continued Operation (JCO) that was not adequately addressed in the ST. Shift personnel were not aware of this requirement. Additionally, the ST only monitored bottle pressure and did not address leak rates. Notification of the System Engineer on bottle change-out was also not being accomplished in accordance with the ST. Operations personnel did not understand that the reason the System Engineers were to be notified was to evaluate abnormal leak rates. Although the backup N₂ supply for AO-2519 was in a degraded condition, the boot seal integrity was maintained by the normal supply of instrument air.

Reasons for the Violation

The operability requirements and importance of the Backup N₂ System were not fully understood by Operations. Additionally, the ambiguity of the Tech Specs was also a contributing factor. ST 7.9.2-2 was inadequate in that it did not address leak rates, JCO requirements, or the importance of notifying System Engineers after bottle replacement.

Corrective Steps Taken and the Results Achieved

The tubing leak on AO-2520 was repaired on November 6, 1990, re-establishing the back-up N₂ supply. The N₂ cylinder that supplied AO-2519 was replaced on November 8, 1990. Event Investigations were initiated for both incidents to determine causes and develop corrective measures to prevent recurrence. On November 30, 1990, a meeting was held with staff management and the NRC to discuss the results of these investigations and planned corrective actions.

Operations personnel were verbally informed of these incidents and the resulting impact on operability determinations. A follow-up package of information was provided to appropriate Operations personnel on December 7, 1990, to further enhance their awareness and understanding of the backup nitrogen supply system and associated operability requirements. Additionally, this package also contained information concerning the

importance and reasoning why the system engineer is required to be notified whenever a bottle is replaced. This discussion was also provided to heighten Operations sensitivity to proper review and disposition of the surveillance test results.

Operations personnel were also provided with an analysis of Technical Specification 3.7.D.2 and 3.7.A.3 as they pertained to these events. This discussion examined the operability determinations and the interpretations proposed during and after the incident, and provided guidance on how to correctly interpret these Tech Specs.

Criteria to address allowable leakage rates and sign-offs for System Engineer notification were also provided through a temporary change to ST 7.9.2-2. In addition, System Engineers now monitor the results of ST 7.9.2-2 to correct any problem where excess leakage could result in an inability to successfully maintain the 20 day back-up supply.

Corrective Steps That Will Be Taken To Avoid Future Violations

A modification (Mod 1316) is currently in progress on Unit 2 to install a backup pressure supply to the boot seals of the Containment Isolation valves from the Containment Atmospheric Dilution (CAD) system. This modification, which has already been installed on Unit 3, will eliminate the requirement for the bottle supplied backup N2 system for these valves. The projected date of completion for this modification is March 15, 1991. Once Mod 1316 is completed, ST 7.9.2-2 will be permanently revised to completely address the operability concerns for N2 bottles used in other applications.

Existing JCO's will be reviewed for required procedure revisions and training issues. A tracking mechanism will be established for action items resulting from JCO's.

Date When Full Compliance Was Achieved

Full compliance was achieved November 8, 1990, when the N2 cylinder supplying AO-2519 was replaced and the 20 day backup supply was achieved. The N2 backup supply to AO-2520 was re-established on November 6, 1990, when the N2 supply line leak was repaired.

REPLY TO NOTICE OF VIOLATION 90-22-03

Restatement of Violation

- B. Technical Specification (TS) 6.5.1 states that written procedures and administrative policies shall be established and implemented that meet the requirements of ANSI N18.7-1972, Section 5.3, and Regulatory Guide (RG) 1.33 (1972). ANSI N18-7, Section 5.3.6, and RG 1.33, Section H, require procedures for the control, storage and use of measuring and test equipment (M&TE). TS 6.5.16 states that the Plant Operation Review Committee (PORC) shall be responsible for review of all procedures required by TS 6.8.

Contrary to the above, as of December 3, 1990, the licensee had not established or implemented a PORC approved procedure addressing the control, storage and use of M&TE as required by the TS 6.8.1 and 6.5.16.

This is a Severity Level IV Violation (Supplement I).

Event Description

The Instrument and Controls (I&C) Shop was originally the Station Test Section of the Research and Testing (R&T) and later Testing and Laboratories (T&L). The R&T Division was identified in the Quality Assurance (QA) Plan to be "responsible to the Electric Production Department for the performance of maintenance of instrumentation as delegated." Additionally, the R&T Division Administrative Procedures for the controls of instrument maintenance activities were to be prepared and approved in accordance with the QA Plan. These procedures required approval by management level personnel in both R&T and QA.

In addition to site equipment maintenance and calibrations, R&T was responsible for the calibration of the test standards used by the site. This was accomplished off-site and was controlled by appropriate procedures. These procedures, though not PORC approved, had significant technical and quality review.

The Construction Division and Maintenance Department were also major users of measuring and test equipment (M&TE). To control the use of M&TE Construction utilized the Construction Division Implementing Procedures (CDIP). Maintenance eventually developed their own PORC and QA approved Maintenance Administrative (MA) procedures. Control of M&TE however, was considered R&T Department responsibilities.

As a result of the shutdown of Peach Bottom in 1987, significant organizational and personnel changes were implemented. One of these reorganizations consisted of removing the I&C Group from T&L and including it within the Station organization. T&L Administrative procedures were not adequately addressed during this reorganization and original personnel familiar with the requirements of T&L procedures were

re-assigned, resulting in a lack of experienced personnel and administrative control.

Nuclear Quality Assurance (NQA) conducted an audit (PA-89-24) of M&TE Control from October 10-25, 1989. During this audit NQA identified several performance discrepancies, including the lack of an approved method to control M&TE. NQA noted that the station was aware of the need for an administrative procedure and that one was in development. It was believed that the procedure would be approved in the near term and was not tracked to a firm completion date. Reassignment of personnel and changes in the Maintenance/I&C Organization were made however, and the procedure was never issued. Corrective Action Request PA-89-24-02 remains open until the Administrative procedure is PORC approved.

During the Unit 3 mid-cycle outage, I&C personnel identified some Rosemount transmitters outside of their expected calibration band. Upon review of the corrective actions to address this problem, the Resident NRC Inspector identified that a PORC and QA approved procedure establishing and implementing a M&TE program had not been established.

Reasons for the Violation

The reasons for the violation include less than adequate turnover of responsibilities during the transfer of I&C personnel to the station and previously not having T&L procedures PORC approved. The transition of the I&C Group from T&L to the station without adequately incorporating appropriate T&L administrative controls resulted in not having a controlling document for M&TE in place.

Corrective Steps Taken And Results Achieved

A Maintenance Guideline has been established for Maintenance/I&C use which contains the appropriate direction for use, control, issue, segregation, review and storage of M&TE until a M&TE Administrative Procedure is implemented. Other T&L procedures are currently being incorporated into PORC approved station procedures as necessary.

Additionally, actions have been taken to improve the M&TE process. The I&C M&TE Room was enlarged to allow better control and organization of test equipment as well as establishing improved access control. A computer bar code system has also been implemented to improve equipment traceability.

An Administrative Foreman position has been established, whose duties include control of the M&TE Room and review of Out-of-Tolerance reports. Additional personnel have been assigned to the M&TE Room and procedure development.

Corrective Steps That Will Be Taken To Avoid Future Violations

An Administrative Procedure has been drafted for the control of M&TE at PBAPS which includes provisions for the use, issue, segregation and storage of M&TE as well as the review for out-of-tolerance reports. This procedure will be appropriately reviewed and approved by the Plant Operating Review Committee (PORC) and Quality Assurance. This procedure will be approved for use by March 15, 1991.

Date When Full Compliance Will Be Achieved

Full compliance will be achieved upon the completion of a PORC approved procedure addressing the control, storage and use of M&TE. This procedure will be completed and PORC approved by March 15, 1991.