

DCS

MAY 23 1988

Docket Nos. 50-277  
50-278

Philadelphia Electric Company  
ATTN: Mr. C. A. McNeill  
Executive Vice President  
Nuclear  
2301 Market Street  
Philadelphia, Pennsylvania 19101

Gentlemen:

Subject: Combined Inspection Report Nos. 50-277/87-32 and 50-278/87-32

This refers to your letters dated March 21, 1988 and April 29, 1988, in response to our letter dated January 25, 1988, which forwarded our Combined Inspection Report 50-277/87-32 and 50-278/87-32.

Thank you for informing us of the corrective and preventive actions and the date when compliance will be achieved as documented in your letters. Your responses addressed each of our inspection report findings.

Your response of March 21, 1988, describes several intended actions that address our inspection findings which are still being developed, are under investigation, or that are to be included in your revised program submittal. We will inspect your final resolution of these actions as you complete them. Please notify the Senior Resident Inspector regarding the status of your final resolution actions.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:

Jacque P. Durr  
Chief, Engineering Branch  
Division of Reactor Safety

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cc w/encl:

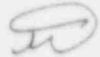
- John S. Kemper, Sr., Senior Vice President-Nuclear
- J. W. Gallagher, Vice President, Nuclear Services
- E. C. Kistner, Chairman, Nuclear Review Board
- Dickinson M. Smith, Vice President, Peach Bottom Atomic Power Station
- Jack Urban, General Manager, Fuels Department, Delmarva Power & Light Co.
- John F. Franz, Plant Manager, Peach Bottom Atomic Power Station
- Troy B. Conner, Jr., Esquire
- W. H. Hirst, Director, Joint Generation Projects Department,  
Atlantic Electric
- Bryan W. Gorman, Manager, External Affairs
- Eugene J. Bradley, Esquire, Assistant General Counsel (Without Report)
- Raymond L. Hovis, Esquire
- Thomas Magette, Power Plant Siting, Nuclear Evaluations
- W. M. Alden, Director, Licensing Section
- Doris Poulsen, Secretary of Harford County Council  
Public Document Room (PDR)  
Local Public Document Room (LPDR)  
Nuclear Safety Information Center (NSIC)  
NRC Resident Inspector  
Commonwealth of Pennsylvania

bcc w/encl:

- Region I Docket Room (with concurrences)
- Management Assistant, DRMA (w/o encl)
- Section Chief, DRP
- Robert J. Bores, DRSS

RI:DRS  
 Gregg/k1  
 4/19/88

RI:DRS  
 Eaden  
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 RI:DRS  
 Durr  
 5/19/88

~~RI:DRS  
 Johnston  
 4/19/88~~

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04/19/88

PHILADELPHIA ELECTRIC COMPANY

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April 29, 1988

E. P. FOGARTY  
MANAGER  
NUCLEAR SUPPORT DIVISION

Docket Nos. 50-277  
50-278

Mr. William V. Johnston, Acting Director  
Division of Reactor Safety  
Region I  
U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Subject: Supplemental Response to NRC Combined  
Inspection Report 50-277/87-32 and 50-278/87-32  
for Peach Bottom Atomic Power Station

Reference: (1) Letter, W. V. Johnston, NRC, to  
J. W. Gallagher, PECO, dated January 25, 1988  
  
(2) Letter, J. W. Gallagher, PECO, to  
W. V. Johnston, NRC, dated March 21, 1988

Dear Mr. Johnston:

In Reference 1, you transmitted Combined Inspection Report No. 50-277/87-32 and 50-278/87-32 for the special team inspection conducted November 2-6, 1987. The subject of the inspection was the Peach Bottom Inservice Testing (IST) Program. Appendix A of Reference 1 identified certain activities which were not in full compliance with NRC requirements. Violation 50-277/87-32-01(a) and 50-278/87-32-01(a) concerned not controlling the Second 10 Year Interval IST Program document in accordance with 10 CFR 50, Appendix B, Criterion VI.

In Attachment 1 to Reference 2, Philadelphia Electric provided a response to the violation. In our response, we discussed the corrective actions to be taken to avoid future non-compliance, but were unable to provide a date when full compliance would be achieved. The purpose of this letter is to inform you that full compliance with 10 CFR 50, Appendix B, Criterion VI in regard to controlling the IST Program document will be achieved by July 1, 1988 when implementation of the control measures as described in Reference 2 will become effective.

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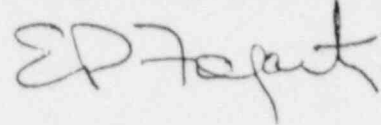
Mr. William V. Johnston, Acting Director

April 29, 1988

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If you have any questions concerning this issue, please do not hesitate to contact us.

Very truly yours,

A handwritten signature in dark ink, appearing to read "T. E. Magette". The signature is written in a cursive style with a large, stylized initial "T" and a long, sweeping underline.

cc: Addressee

W. T. Russell, Administrator, Region I, USNRC  
T. P. Johnson, USNRC Senior Resident Inspector  
T. E. Magette, State of Maryland

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JOSEPH W. GALLAGHER  
VICE PRESIDENT  
NUCLEAR SERVICES

March 21, 1988

Docket Nos. 50-277  
50-278

Mr. William V. Johnston, Acting Director  
Division of Reactor Safety  
Region I  
U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Subject: Response to NRC Combined Inspection Report  
50-277/87-32 and 50-278/87-32 for Peach Bottom  
Atomic Power Station

Dear Mr. Johnston:

Your letter dated January 25, 1987 transmitted Combined Inspection Report No. 50-277/87-32 and 50-278/87-32 for the special team inspection conducted November 2-6, 1987. The subject of the inspection was the Peach Bottom Inservice Testing (IST) Program. Appendix A of your letter identified certain activities which were not in full compliance with NRC requirements. In addition, several unresolved items and weaknesses were identified.

Attachment 1 to this letter contains our response to the two violations. Attachments 2 and 3 respond to the unresolved items and weaknesses, respectively. As identified in your letter, some of the unresolved items and weaknesses involve schedular response commitments.

Philadelphia Electric Company is in the process of upgrading the entire scope of the PBAPS IST Program. The upgrade will include a revision to the existing Section XI Pump and Valve Test Program and implementing procedures. As indicated in paragraph 5.1.2 of the Combined Inspection Report, this was the topic of a meeting on February 22-23, 1988 with the NRC staff. During the meeting, Philadelphia Electric Company stated that we would target our resubmittal of the revised Peach Bottom Second 10-year Interval IST Program for July 1, 1988. We understand that in order for the NRC staff to reach their goal of completing their review of our IST Program during 1988, it is necessary that we submit our revised program in a timely fashion. We are currently developing a plan and milestone schedule to perform a comprehensive review of the ASME

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Section XI ISI/IST programs at Peach Bottom and Limerick. Because of the intended comprehensive nature of our review plan, we have not yet fully defined the scope and level of effort required at this time. We will make every effort to resubmit our revised Peach Bottom Second 10-year Interval IST Program by July 1, 1988.

The desirability of delaying our response to the inspection report until after the February 22-23, 1988 meeting was discussed with P. K. Eapen of your staff by W. M. Alden, Director of the Licensing Section. It was determined that it would be beneficial to discuss current staff positions on IST issues with the NRC so that they could be incorporated into our response. It was agreed that Philadelphia Electric Company would need no more than four weeks following the meeting to provide this response.

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

Very truly yours,

*JW Gallagher*

cc: Addressee

W. T. Russell, Regional Administrator, Region I, USNRC  
T. P. Johnson, Senior Resident Inspector, USNRC  
R. J. Clark, Project Manager, NRR, USNRC  
R. E. Martin, Project Manager, NRR, USNRC  
T. E. Magette, State of Maryland

Restatement of Violation:

10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants contains regulatory requirements relating to documents and procedure control. Two examples of the licensee's inservice testing (IST) activities not meeting this regulatory requirement were:

1. 10 CFR 50, Appendix B, Criterion VI, Document Control, states in part "Measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy.....Changes to documents shall be reviewed and approved by the same organizations that performed the original review ....."

The licensee's Operations Quality Assurance Program requires measures to assure that documents, including changes, which effect quality are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed.

Contrary to the above, as of November 6, 1987, copies of the licensee's second 10-year IST program for pumps and valves have been distributed to different site organizations as uncontrolled documents. Changes have been made locally by the users without formal review or approval.

This is a Severity Level IV violation. (Violation 50-277/87-32-01(a) and 50-278/87-32-01(a))

2. 10 CFR 50, Appendix B, Criterion V, Instructions Procedures and Drawings, states in part that, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings ..... and shall be accomplished in accordance with these instructions, procedures or drawings."

The licensee's surveillance test (ST) procedure ST 6.10-3 requires that the "Additional action required" portion of the cover sheet be filled in and signed when pump test results are in the Alert Range.

Contrary to the above, the 6.10-3 test records of 6/19/87 and 7/17/87 showed the pumps to be in the Alert Range and the "Additional action required" portion of the cover sheet had no entry in both instances and was not signed in one instance.

This is a Severity Level IV violation. (Violation 50-278/87-32-01(b))

Admission or Denial of the Violation:

Philadelphia Electric Company acknowledges the violation as stated.

Reason for the Violation:

Example 1 which was against Criterion VI of Appendix B is a result of a failure to recognize the need to formalize the overall control process of the IST Program. The individual tasks of controlling the IST Program Document such as review, approval and distribution were performed by various groups but were not under the cognizance of one focal group or under the direction of approved procedures.

Example 2 which was against Criterion V of Appendix B is a result of an inadequate procedure. An investigation determined that Administrative Procedure A-47, Rev. 8 does not contain adequate instructions for completing the Additional Action section on the cover sheets for ISI related surveillance tests (ST), nor does it designate who is responsible for completing the section.

Extent or Significance of the Violation:

There were no adverse safety consequences as a result of either example of the violation.

The appropriate expertise needed to revise and implement the IST Program has been maintained. While the lack of a formal administrative control procedure may have resulted in a lack of continuity in controlling the program, it does not appear to have impacted the effectiveness of the program. All changes that were made onsite by the implementers of the IST Program were corrections to typographical errors. No changes were made to vary the intent, scope or testing methods as already described by the Second 10-year IST Program.

Example 2 of the violation involved specific documentation failures only. Although not correctly documented on the surveillance test cover sheet, the required additional actions were taken. Both alert range pump tests resulted in the issuance of appropriate Maintenance Request Forms (MRFs). While the pump test results were in the alert range, they did satisfy the acceptance criteria for Technical Specification and Section XI operability.



Corrective Actions and Results Achieved:

In response to Example 1, Philadelphia Electric recognizes the need for corrective action not only for the IST Program, but for the entire ISI Program. The Nuclear Engineering Department has been identified as the appropriate organization to develop and maintain an ISI/IST Program Document which satisfies the issuance, distribution and review requirements of Criterion VI of Appendix B to 10 CFR 50. This group is currently coordinating the overall revision to the Second 10-year Interval IST Program. This effort will establish the Nuclear Engineering organization as the initial review group and will allow for consistency in the review and approval of future changes to the IST Program.

In response to Example 2, the Peach Bottom site Project Engineering group has been assigned to revise procedure A-47 to include adequate instructions for completing the "Additional Action Required" section of ISI-related surveillance tests and to identify who has responsibility for completing this section. A memorandum was issued on February 29, 1988 to all Shift Managers indicating that the operator performing the surveillance test is responsible for completing the "Additional Action Required" section. This memo will ensure compliance with Criterion V while A-47 is being revised.

Corrective Actions to be Taken to Avoid Future Non-Compliance:

The Nuclear Engineering Department will develop and maintain measures for controlling the ISI/IST Program Document. These control measures will assure that the ISI/IST Program Document, including changes, is reviewed for adequacy and approved for release by authorized personnel and is distributed to and used at the locations where the ISI/IST Program is implemented. These control measures will document accountabilities for all organizations including: Nuclear Engineering, PBAPS Technical group and the ISI Nuclear Maintenance group. Appropriate onsite and offsite administrative procedures will be revised or developed accordingly.

Administrative Procedure A-47 will be revised by May 16, 1988 to include adequate instructions for completing the data sheet and a designation of the required signature.

Date When Full Compliance Will Be Achieved:

The control measures for the program document, as previously defined in the "Corrective Actions to be Taken to Avoid Future Non-Compliance" section, are being developed. Full compliance with Criterion VI will be achieved upon implementation of these measures. Philadelphia Electric will provide a date for implementation by April 30, 1988.

Full compliance with Criterion V was achieved on March 18, 1988, when review by the Shift Managers of the February 29, 1988 memorandum was documented.

Restatement of the Violation:

10 CFR 50.55a(g) requires adherence to Section XI of the ASME Boiler and Pressure Vessel Code for inservice testing (IST) of pumps and valves. The licensee's second ten year interval IST program commits to compliance with the requirements of the 1980 Edition of Section XI, through 1981 winter addenda. Two examples of the licensee's IST activities not meeting Section XI requirements were:

1. ASME Section XI, IWP-3100 requires that pump operational reference values be established. IWP-3100 required that "the resistance of the system shall be varied until either the measured differential pressure or the measured flow rate equals the corresponding reference value".

Contrary to the above, the licensee's procedure 6.10-3 contains criteria that permits simultaneous variation of pressure and flow from the reference values. This permits a broader acceptable range and is not in accordance with Section XI.

This is a Severity Level IV violation. (Violation 50-277/87-32-02(a) and 50-278/87-32-02(a))

2. ASME Section XI, IWP-3500(b) for measurement of pump bearing temperature requires that, "each pump shall be run until the bearing temperatures stabilize, and then ..... be measured or observed and recorded. A bearing temperature shall be considered stable when three successive readings taken at 10 minutes intervals do not vary by more than 3%".

Contrary to the above, the licensee's procedure ST 6.5, Rev. 42, doesn't specify this requirement, doesn't provide the space for recording three readings and doesn't specify acceptance criteria for bearing temperatures.

This is a Severity Level IV violation. (Violation 50-277/87-32-02(b) and 50-278/87-32-02(b))

Admission or Denial of the Violation:

Philadelphia Electric Company acknowledges the violation as stated.

Reason for Violation:

Example 1 which was against IWP-3100 is a result of a deviation from Relief Request 6.3.7. This deviation was caused by a misinterpretation of the requirements for establishing the reference values for the High Pressure Service Water (HPSW) pumps as required by Section XI. Allowable ranges were simultaneously established for both pump flow and differential pressure, which created a broader "acceptable" range than that allowed by Section XI. This issue was discussed as Pump Testing Program Question No. 4 during the February 22 and 23, 1988 meeting with the NRC.

Example 2 which was against IWP-3500(b) is a result of an inadequate review of the IST Program. The HPCI pump was mistakenly omitted from Relief Request 6.3.2.

Extent or Significance of Violation:

There were no adverse safety consequences as a result of either example of the violation.

The establishment of allowable ranges for both flow rate and differential pressure allowed a slight leniency in establishing the "acceptable" range of HPSW pump performance. The current ST 6.10 allows a two-dimensional window of acceptability. This window is the intersection of the acceptable flow rate range and the acceptance differential pressure range. Although the "acceptable" range did not satisfy the requirements of IWP-3100, pump performance was still bounded by an "alert" range and an "unacceptable" range in accordance with Table IWP-3100-2. Further, a review of actual test data indicated that pump performance was always within the more stringent range as required by IWP-3100.

The justification for relief from the pump bearing temperature requirements was discussed as Pump Testing Program Question No. 1 during the February 22 and 23, 1988 meeting with the NRC. Philadelphia Electric explained that running the HPCI pump for the required 30 minutes would cause undesirable heating of the suppression pool. The NRC staff agreed that under the circumstances, relief from IWP-3500(b) was appropriate, and would not compromise plant safety.

Corrective Actions Taken and Results Achieved:

In response to Example 1, Philadelphia Electric is investigating pump testing methods which involve establishing acceptance criteria based on a band around the established pump curve.

In response to Example 2, no immediate corrective actions are appropriate since the current surveillance test (ST 6.5, Rev. 42)

already incorporates the NRC position as stated at the February 22-23, 1988 meeting.

Corrective Actions to be Taken to Avoid Future Non-Compliance:

Surveillance procedure ST 6.10-2 and 3 will be revised to meet the requirements of IWP-3100. A revised Relief Request 6.3.7 will be included in the revised Second 10-year Interval IST Program.

Relief Request 6.3.2 will be revised to request relief from the pump bearing temperature requirements for the HPCI pump. The overall review process for the ISI Program will be enhanced by the implementation of control procedures resulting from Violation 50-277/87-32-01(a) and 50-278/87-32-01(a). These enhancements should preclude future omissions from relief requests.

Date When Full Compliance Will be Achieved:

Full compliance with IWP-3100 will be achieved for each unit when the respective ST 6.10 is revised. Revising the STs requires running each HPSW pump to establish individual pump curves of differential pressure versus flow rate. Running the pumps is contingent upon system outage windows. Full compliance for Unit 2 is expected to be achieved by May 31, 1988 when ST 6.10-2 is revised. Full compliance for Unit 3 is expected to be achieved prior to core reloading when ST 6.10-3 is revised. While the Unit 3 core is offloaded, the HPSW system is not required to be operable.

Based on discussions at the February 22-23 meeting, it is believed that full compliance with IWP-3500(b) will be achieved when a revised Relief Request 6.3.2 is submitted. This Relief Request will be included in the revised Second 10-year Interval IST Program. Philadelphia Electric will make every effort to submit this revised IST Program by July 1, 1988.

Unresolved Item 50-277/87-32-03 and 50-278/87-32-03:

Lack of procedural verification of check valve backflow  
(paragraph 8.1.2)

Specific concern associated with this issue is as follows:

- o High Pressure Service Water (HPSW) ST 6.10-2 and 3 require the full stroke opening of discharge check valves 502 A, B, C and D. However, these valves also have a safety-related function to prevent backflow from the other pumps. ST 6.10-2 and 3 do not contain any explicit provisions to verify that backflow through the pump discharge valves will not occur.

Response:

This issue was discussed as Question B.4 at the February 22-23, 1988 meeting with the NRC. Surveillance procedures ST 6.10-2 and 3 will be revised by March 31, 1988 to include steps to verify full stroke opening and closure. Additionally, as discussed further in the response to Weakness No. 1, the valve table in the revised IST Program will include a column designating each valve's safety related position (open, closed or both).

Unresolved Item 50-277/87-32-04 and 50-278/87-32-04:

Deficiency in satisfying full stroke requirements (paragraph 8.2)

Specific concerns associated with this issue are as follows:

- o Emergency Service Water (ESW) ST 6.3 does not verify full stroke exercising of check valves 515A and B.
- o The IST Program designates these valves as being mechanically exercised while the actual surveillance procedure requires flow testing.

Response:

This issue was discussed as Question B.1 at the February 22-23, 1988 meeting with the NRC. Valves 515A and B will be full stroke exercised open; however, the test method and frequency are under investigation. The results of the investigation will be included in

the revised Second 10-year Interval IST Program. Any appropriate changes to Relief Request 7.3.28 will be included in the revised Program.

Unresolved Item 50-277/87-32-05 and 50-278/87-32-05:

Lack of full flow/Full stroke of High Pressure Coolant Injection (HPCI) torus suction check valve (paragraph 8.4.1)

Specific concern associated with this weakness is as follows:

- o Review of surveillance procedure ST 6.5B, Rev. 5, which includes steps for exercising the HPCI pump suction check valve from the torus, VV-23-61, specifically states in step 14 that "full flow may not be possible through MO-31", the flowpath established for exercising VV-23-61, indicating that a full-flow/full-stroke exercise of this check valve is not performed by this test. ASME Section XI, IWV-3522 requires full stroke exercising but the licensee's IST program does not include a relief request for not full-stroke exercising this check valve.

Response:

This issue was discussed as Question R.10 at the February 22-23, 1988 meeting with the NRC. It was agreed that VV-23-61 performs a safety related function in the open position only. Philadelphia Electric will determine a method for full stroke exercising this valve, and will revise ST 6.5B accordingly by July 1, 1988.

Unresolved Item 50-277/87-32-06 and 50-278/87-32-06:

Contradictory inoperability statement (paragraph 8.5)

Specific concern associated with this weakness is as follows:

- o Review of surveillance procedure ST 6.9F, Rev. 8, data sheet specifically states that exceeding the IST stroke time criteria does not result in a valve being inoperable. This is contrary to ASME Section XI, IWV-3417(b) which requires that corrective action be initiated immediately, and if the condition is not or cannot be corrected within 24 hours, the valve shall be declared inoperative.

Response:

The data sheet for ST 6.9F does state that exceeding the IST stroke time limit does not result in a valve being declared inoperable. Operability is determined by either a Technical Specification or FSAR stroke time which is listed for each valve in the "inoperable time" column on the data sheet. When the "inoperable time" limit is exceeded, the 24 hour repair period as allowed by IWV-3417(b) is not exercised. The valve is declared inoperable immediately. When the IST stroke time is exceeded, a Maintenance Request Form is initiated to investigate for potential degradation, but the valve is not declared inoperable. The IST stroke time is always equal to or more limiting than the "inoperability time". Additional discussion is provided in the response to Weakness No. 3.

Unresolved Item 50-277/87-32-07 and 50-278/87-32-07:

Void in leakage rate and corrective action for containment isolation valves (paragraph 9.2)

Specific concern associated with this weakness is as follows:

- o The leak rate testing records for containment isolation valves at penetrations N-9A, N-214 and 52F appeared to indicate that the requirements of Section XI, IWV-3426 and 3427 for the establishment of leak rate and trending criteria and corrective action, are not met.

Response:

The individual leak rate limit for all LLRT valves is 9000 scc/min. This criterion is indirectly stated in the STs by the statement "verify no off scale leakage", in that full scale of leakage measuring devices is 9000 scc/min. The combined leak rate of all penetrations and valves subject to Type B and C local leak rate testing is limited to 0.6 La, where La is equal to 0.5%/day leakage of the contained volume of gas in primary containment at peak accident pressure. To more clearly demonstrate compliance with IWV-3426 and 3427, all LLRT procedures will be revised prior to startup of Unit 2 or Unit 3 to include the designation of more definitive allowable leak rates. These leak rates will be explicitly stated in the surveillance tests.

Unresolved Item 50-277/87-32-08 and 50-278/87-32-08:

10.0) Inability to full stroke testable check valves (paragraph

Specific concern associated with this weakness is as follows:

- o The Rockwell check valves are identified in the IST Program as being full stroke exercised by using the test operator on the valve; however, the design appears to only stroke the valve 30 degrees of disk swing.

Response:

This issue was discussed as Question N.2 for Reactor Core Isolation Cooling (RCIC) and R.3 for HPCI during the February 22-23, 1988 meeting with the NRC. During maintenance associated with the Unit 2 pressure isolation valve leak rate testing, all Unit 2 Rockwell testable check valves in the HPCI, RCIC and A and B loops of the core spray systems were verified to fully open. Philadelphia Electric recognizes that this is only a partial confirmation of valve reliability, and is investigating two possibilities for satisfying the full stroke requirement of Section XI, IWV-3522(b): 1) by demonstrating through an engineering analysis of pump capacity and system resistance that a 30 degree swing is sufficient to allow rated pump flow and 2) by modifying the air operator to allow a 70 degree swing. The results of the investigation will be included in the revision to the Second 10 year IST Program.

Unresolved Item 50-277/87-32-09 and 50-278/87-32-09:

High Pressure Service Water pump packing problem and crosstie valve repair (paragraph 12.0)

Specific concerns associated with this weakness are as follows:

- o There appears to be a generic packing problem associated with the HPSW pumps.
- o Under the current plant condition with the 3A and 3C HPSW pumps out of service, a safety concern may exist if the core were loaded and the crosstie valve MO-3344 leakage was significant enough to limit flow through the operational Residual Heat Removal heat exchanger to less than the required 4500 gpm.

Response:

The generic packing problem with the HPSW pumps will be addressed by plant modification 2329. This modification is planned



for all four pumps in each unit, and will be completed on each unit prior to startup of that unit. As indicated in the inspection report finding, the motor operated crosstie valve on Unit 3 will be repaired prior to reloading the core.

WEAKNESS NO. 1:

Lack of identification of valve position (paragraph 5.1.1)

Response:

Philadelphia Electric Company has reviewed the identified weakness and considers it to be accurate.

A new column will be added to the valve table in the IST Program which will designate the safety related position (open, closed or both) of each valve. This addition will be included in the next revision to the Second 10-year Interval IST Program. As part of the revision process to the IST Program, all Surveillance Tests will be reviewed to verify that the prescribed testing is appropriate for each valve's safety related position(s).

WEAKNESS NO. 2:

Lack of capability to verify test schedule adherence by component (paragraph 7.0)

Response:

Philadelphia Electric Company has reviewed the identified weakness and considers it to be accurate.

Verification of test schedule adherence on a component basis is possible, but it requires several steps. First, the system must be identified. This is obvious for pumps since the system name is included in the pump designation. For valves, the system is encoded in the valve number. A reference of system numbers is readily available. Once the system is specified, the corresponding STs must be identified. This is also accomplished through the use of a readily available cross reference. The ST numbers are then entered into the ST program to verify schedule adherence. While the process appears to be lengthy, most personnel associated with testing are familiar with both system numbers and their corresponding STs, and can therefore access the ST program with little effort. Philadelphia Electric agrees that a more direct approach to verification of schedule adherence would be beneficial. A computer program is being developed to track all ISI testing on a component basis and on an ST basis. This program will be available by restart of Unit 2 or 3.

WEAKNESS NO. 3:

Lack of specifying corrective actions and declaration of inoperability (paragraph 8.1.1)

Specific concern associated with this weakness is as follows:

- o High Pressure Service Water procedure ST 6.10-2 and 3 requires that valve stroke times be recorded. If the limiting stroke time for any valve is exceeded, the test results are considered unsatisfactory and indicated as such on the ST cover sheet. However, the ST does not specify the corrective actions that should be taken or when the valve must be declared inoperable in accordance with IWV-3417.

Response:

Philadelphia Electric has reviewed the identified weakness and consider it to be accurate.

Philadelphia Electric acknowledges that more clearly defined valve stroke time acceptance criteria are necessary in the IST-related surveillance tests. In addition, the proper corrective actions and/or declaration of inoperability must be clearly defined in each test for all possible test results. Therefore, all IST-related surveillance tests will be revised, as necessary, by July 1, 1988 to alleviate any future confusion with valve stroke time acceptability and operability. During NRC inspection 87-32, the Peach Bottom Administrative Procedures were reviewed to determine if the process of following up on delinquent testing and unsatisfactory test results was clearly defined. The finding expressed at the November 11, 1987 exit meeting was that these procedures were acceptable.

WEAKNESS NO. 4:

Confusion with dual stroke time limits (paragraph 8.3.1)

Specific concern associated with this weakness is as follows:

- o High Pressure Coolant Injection surveillance procedure ST 6.5, Rev. 42 identified two different stroke time limits for valves MO-4(5)-245, a Technical Specification limit of 15 seconds and an IST limit of 19 seconds.

Response:

Philadelphia Electric Company has reviewed the identified weakness and considers it to be accurate.

Surveillance procedure ST 6.5 will be revised by March 31, 1988 to identify an IST stroke time of 15 seconds instead of 19

seconds for valves MO-4(5)-245. This will be consistent with the philosophy that the IST stroke time is always equal to or more limiting than the "inoperability time".

WEAKNESS NO. 5:

Delay in correcting procedure (paragraph 8.4.2)

Specific concern associated with this weakness is as follows:

- o A note was made on HPCI surveillance procedure ST 6.5B, Rev. 4 that Step 11 included a typographical error by referencing valve MO-23-21 twice rather than MO-23-21 once and MO-32-31 once. This typographical error still exists in Revision 5.

Response:

Philadelphia Electric Company has reviewed the identified weakness and considers it to be accurate.

Surveillance procedure ST 6.5B will be revised by March 31, 1988 to correct the typographical error.

WEAKNESS NO. 6:

9.1.2) Inability to verify proper post maintenance test (paragraph 9.1.2)

Specific concern associated with this weakness is as follows:

- o Maintenance Request Forms (MRF) were generated as a result of performing HPSW ST 6.10-3. The MRFs required repair of the 502A and B discharge check valves. The closed out MRF for the 502A valve indicated that the valve was repaired and that post-maintenance testing was performed. However, it could not be verified through official records that the testing verified the proper functioning of the valve in both the fully open and fully closed positions. This procedure is not appropriate for post maintenance testing as it does not require backflow testing explicitly.

Response:

Philadelphia Electric Company has reviewed the identified weakness and considers it to be accurate.

Post maintenance testing for IST components incorporates the requirements of the appropriate STs. The cause of this weakness is that ST 6.10-3 does not require adequate testing of the 502A and B valves. Philadelphia Electric has already committed to revise ST 6.10-2 and 3 in response to Unresolved Item 50-277/87-32-03 and 50-278/87-32-03. This revision will verify proper functioning of the 502A through D valves in the both the fully open and fully closed positions. Additionally, in response to Weakness No. 1, Philadelphia Electric will examine all IST-related STs to verify that the prescribed testing is appropriate for each valve's safety related position(s). The combination of revising ST 6.10-2 and 3 and examining all IST-related STs is required to resolve this issue both specifically for the 502A and B valves and generically for all IST components.

WEAKNESS NO. 7:

Limited QA/QC overview of IST Program (paragraph 13.0)

Response:

Philadelphia Electric Company has reviewed the identified weakness and considers it to be accurate.

The 1986 ISI Program Audit focused attention on the satisfactory completion of Technical Specification Surveillance Tests as the method for verifying implementation of the PBAPS ISI Program. It was concluded that the PBAPS surveillance test procedures contained equivalent test methods and scope test quantities to meet the ASME Section XI IST requirements. This approach did not permit full evaluation of ASME Section XI performance aspects which are not clearly defined as compliance criteria.

Philadelphia Electric Company is reorganizing its Nuclear Quality Assurance (NQA) organization. Part of this onsite reorganization involves the formation of a Technical Services Group. Technical issues such as the IST Program will be evaluated by this group.

In response to the specific weakness in paragraph 13.0, Philadelphia Electric has reviewed the Peach Bottom Audit Program as it relates to IST and is taking the following corrective action to prevent recurrence:

1. The IST Program will be separated from the annual PBAPS ISI Audit scope, and the IST Program will be evaluated in a separate audit. This will permit the auditor to focus

attention on the technical issues required for the IST Program by ASME Section XI.

2. In 1988, an IST Audit utilizing an IST Technical Specialist will be performed.
3. An IST audit was conducted in December, 1987, subsequent to the NRC inspection. The corrective actions resulting from the audit findings will be reviewed by NQA. Special attention will be given to the elimination of the following weaknesses identified in the 1987 audit:
  - The PBAPS Second 10-year Interval ISI Program is not a formally controlled document that is revised to reflect station modifications, ASME Code Case acceptance and other related NUREG or NRC Regulatory Guide commitments.
  - There is no direct Maintenance ISI Group involvement in the functional testing of valves and pumps, and for reviewing and trending test results and discrepancies.
  - The responsibilities and the interfacing of the PBAPS maintenance and project engineers for the performance of Surveillance Test/Inservice Inspection (ST/ISI) procedures are not defined.
4. During the preparation of the new PBAPS Nuclear Quality Assurance procedures, consideration will be given to specifying the necessary elements of the IST Program that need to be audited.
5. The position of Assistant Superintendent, Technical Monitoring, was established in the PBAPS NQA reorganization. This individual will be responsible for reevaluation of the QC Technical Monitoring Program and will address the need for the monitoring aspects of the IST Program. This individual will also ensure that adequate resources are allocated to monitor the various ongoing activities of the PBAPS IST Program.

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E. P. FOGARTY  
MANAGER  
NUCLEAR SUPPORT DIVISION

April 29, 1988

Docket Nos. 50-277  
50-278

Mr. William V. Johnston, Acting Director  
Division of Reactor Safety  
Region I  
U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Subject: Supplemental Response to NRC Combined  
Inspection Report 50-277/87-32 and 50-278/87-32  
for Peach Bottom Atomic Power Station

Reference: (1) Letter, W. V. Johnston, NRC, to  
J. W. Gallagher, PECO, dated January 25, 1988  
(2) Letter, J. W. Gallagher, PECO, to  
W. V. Johnston, NRC, dated March 21, 1988

Dear Mr. Johnston:

In Reference 1, you transmitted Combined Inspection Report No. 50-277/87-32 and 50-278/87-32 for the special team inspection conducted November 2-6, 1987. The subject of the inspection was the Peach Bottom Inservice Testing (IST) Program. Appendix A of Reference 1 identified certain activities which were not in full compliance with NRC requirements. Violation 50-277/87-32-01(a) and 50-278/87-32-01(a) concerned not controlling the Second 10 Year Interval IST Program document in accordance with 10 CFR 50, Appendix B, Criterion VI.

In Attachment 1 to Reference 2, Philadelphia Electric provided a response to the violation. In our response, we discussed the corrective actions to be taken to avoid future non-compliance, but were unable to provide a date when full compliance would be achieved. The purpose of this letter is to inform you that full compliance with 10 CFR 50, Appendix B, Criterion VI in regard to controlling the IST Program document will be achieved by July 1, 1988 when implementation of the control measures as described in Reference 2 will become effective.