

October 14, 1998

Mr. G. Rainey, President
PECO Nuclear
Nuclear Group Headquarters
Correspondence Control Desk
P.O. Box 195
Wayne, Pennsylvania 19087-0195

SUBJECT: COMBINED INSPECTION REPORT NOS. 50-277/98-01 AND 50-278/98-01

Dear Mr. Rainey:

This letter refers to your June 3, 1998 and September 22, 1998 correspondence, in response to our May 1, 1998 letter.

Thank you for informing us of the corrective and preventive actions documented in your letter. These actions will be examined during a future inspection of your licensed program.

Your cooperation with us is appreciated.

Sincerely,

Original Signed by:

Clifford J. Anderson, Chief
Projects Branch 4
Division of Reactor Projects

Docket Nos. 50-277; 50-278

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PDR ADDCK 05000277
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A Unit of PECO Energy

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June 3, 1998

Docket Nos. 50-277
50-278
License Nos. DPR-44
DPR-56

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

Subject: Peach Bottom Atomic Power Station Units 2 & 3
Response to Notice of Violations (Combined Inspection Report No. 50-
277/98-01 & 50-278/98-01)

Gentlemen:

In response to your letter dated May 7, 1998 which transmitted the Notice of Violations concerning the referenced inspection report, we submit the attached response. The subject report concerned a Residents' Integrated Safety Inspection that was conducted March 8 through May 3, 1998.

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

John Doering, Jr.
Vice President,
Peach Bottom Atomic Power Station

Attachments

MT/mt

cc: N.J. Sproul, Public Service Electric & Gas
R. R. Janati, Commonwealth of Pennsylvania
H. J. Miller, US NRC, Administrator, Region I
A. C. McMurtry, US NRC, Senior Resident Inspector
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62A-1, Chesterbrook
63C-3, Chesterbrook
63C-3, Chesterbrook
SMB4-9, Peach Bottom
62C-3, Chesterbrook
53A-1, Chesterbrook
S23-1, Main Office
SMB4-6, Peach Bottom
62A-1, Chesterbrook
62A-1, Chesterbrook
S13-1, Main Office
A4-1S, Peach Bottom
SMB3-5, Peach Bottom
A4-1S, Peach Bottom
61C-1, Chesterbrook
A4-4S, Peach Bottom
A4-5S, Peach Bottom

RESPONSE TO NOTICE OF VIOLATION 98-01

Restatement of Violation

1. Technical Specification 5.4.1 requires, in part, that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Appendix A, November 1972. The procedures listed in Regulatory Guide 1.33, Appendix A, include those covering procedure adherence.

Operations Manual, OM-P-7.1, Revision 0, "Alarms and Indications," Step 4.1.5, required the control room supervisor to verify an expected alarm acknowledgment visually by looking toward the alarming unit or verbally communicate alarm acknowledgment with the reactor operator/plant reactor operator.

Contrary to the above, on January 28, 1998, the NRC identified that a control room supervisor did not visually verify or verbally communicate alarm acknowledgment of an expected alarm that came in on Unit 3 because he was outside his designated work station without temporary relief.

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

2. Technical Specification Surveillance Requirement 3.4.1.1 requires, in part, that recirculation loop jet pump flow mismatch be verified every 24 hours when the reactor is in Modes 1 or 2 and both recirculation loops are in operation.

Contrary to the above, on January 3, 1998, the licensee identified that recirculation loop jet pump flow mismatch had not been verified for over 24 hours with the Unit 2 reactor in Mode 2 and both recirculation loops in operation.

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

3. Technical Specification Surveillance Requirement 3.4.1.2 requires, in part, that core flow as a function of THERMAL POWER be verified to be in the "Unrestricted" Region of Figure 3.4.1-1 every 24 hours when the reactor is in Modes 1 or 2.

Contrary to the above, on January 3, 1998, the licensee identified that core flow as a function of THERMAL POWER had not been verified to be in the "Unrestricted" Region of Figure 3.4.1-1 for over 24 hours with the Unit 2 reactor in Mode 2.

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

4. Technical Specification 5.4.1 requires, in part, that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Appendix A, November 1972. The procedures listed in Regulatory Guide 1.33, Appendix A, include those covering procedure adherence, authorities and responsibilities for safe operation, equipment control, shift and relief turnover, and turbine startup.

Contrary to the above, several examples of failures to implement and maintain written procedures were identified when the Unit 2 main turbine tripped on January 1, 1998. Specifically, IC-11-00497, Revision 4, "Alignment Procedure for the Electro-hydraulic Control (EHC) System of the General Electric Turbine Generator" and GP-2, Revision 85, "Normal Plant Start-up" failed to maintain instructions to restore the EHC system to the alignment required for start-up. Also, operations personnel failed to adequately implement the following procedures: 1.) SO 1B.1.A-2, Revision 22, "Main Turbine Startup and Normal Operation" which contained instructions to close the turbine control valves by verifying that the EHC speed select was at "ALL VALVES CLOSED." This procedure was required to be used by GP-2 for resetting the main turbine. 2.) OM-C-6.1, Revision 1, "Shift Turnover" and OM-P-3.3, Revision 5, "Licensed Operators" which required monitoring and recognition of equipment status and panel walkdowns with sufficient detail to understand plant conditions. Operations personnel failed to recognize the main turbine status, position of the turbine control valves, or the selection of the speed set for the EHC system prior to the main turbine trip.

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

5. Facility Operating License DPR-56, Section 2.C.(1) authorizes PECO Energy Company to operate Peach Bottom Atomic Power Station (PBAPS), Unit 3, at steady state reactor core power levels not to exceed 3458 megawatts thermal (100 percent of rated thermal power).

Contrary to the above, PECO Energy Company operated PBAPS Unit 3 at a thermal power in excess of 3458 megawatts between October 22, 1995 and January 21, 1997. PECO Energy Company operated the reactor at a steady state power level up to 100.6% of rated power. This occurred due to errors in the calibration of feedwater temperature instruments in June 1995.

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

Background Information

Violation 1

On January 28, 1998 NRC inspectors observed that the Control Room Supervisor (CRS) was outside of the designated main control room work area for several minutes without obtaining temporary relief. During this time the inspectors observed an expected annunciator alarm come in on the unit 3 panels. The Unit 3 Reactor Operator (RO) acknowledged the alarm however, the CRS was not able to verify the alarm acknowledgment because he was not in the main control room area. The CRS moving to other areas of the control room in accordance with operations manual requirements had become an accepted practice. A review of Operations Manual requirements, OM-P3.2 and OM-P-7.1, indicated a difference with respect to responsibilities and requirements when moving to other parts of the control room.

Operations Manual OM-P-3.2 Rev. 9 "Senior Licensed Operators" allows a CRS to move for brief periods to other parts of the control room, without obtaining temporary relief. In order to move to other parts of the control room, the CRS must remain in sight of, or in audible range of, the unit ROs or remain in the audible range of the control room annunciators.

Operations Manual, OM-P-7.1, "Alarms and indications", which was revised on January 14, 1998, requires the CRS to verify the alarm acknowledgment visually by looking towards the alarming unit and if visual verification is not made the CRS should verbally communicate alarm acknowledgment with the RO.

This difference in the expectations for the CRS in the control room was a contributing factor in the CRS not acknowledging the expected alarm on January 28, 1998. The CRS's failure to either visually or verbally verify the alarm acknowledgment because he was not in the control room area, and neither heard or saw the acknowledgment is a violation of Operations Manual OM-P-7.1 which is required by Technical Specification of 5.4.1.

Violations 2 & 3

On day shift January 2, 1998, the readings for Surveillance Test (ST)-O-02F-560-2, "Daily Jet Pump Operability" were not taken and recorded. This ST verifies compliance with Technical Specification Surveillance Requirements (SR) 3.4.1.2 and 3.4.1.1. SR 3.4.1.2 ensures the reactor Thermal Power and core flow are within appropriate parameter limits to prevent uncontrolled power oscillations. SR 3.4.1.1 ensures the recirculation loops are within the allowable limits for mismatch. Operations personnel believed that the ST was not required to be performed at that time. In addition, the ST sections were marked "N/A". The ST is required to be performed in Modes 1 and 2 once per 24 hours. Unit 2 was in mode 2 at the time of the missed surveillance.

The Unit 2 Reactor Operator (RO) discussed performance of the ST with the Control Room Supervisor and after review of section 1.0, "Purpose" the Control Room Supervisor agreed that the ST did not need to be performed. This decision was based on the statement that "verification of jet pump operability per Surveillance Requirement (SR) 3.4.2.1 (section 6.4) is not required to be performed until four hours after the associated recirculation loop is in operation and until 24 hours after greater than 25 percent reactor thermal power". Reactor power was about one percent and the readings were marked "N/A". SR 3.4.1.1 was also not conducted based on this assumption.

The issue was discovered on January 3, 1998, when the test was to be performed by a different dayshift reactor operator who was preparing to perform the ST. During his review of the previous day's data, the reactor operator questioned the Shift Technical Advisor (STA) if the previous day's data should have been taken. Reviews of Technical Specifications and the ST for SR 3.4.1.1 and 3.4.1.2 determined that the test was to be performed by 10:00 a.m. on January 2, 1998, to maintain the test within surveillance frequency. Unit 2 reactor startup was in progress at the time of the missed surveillance. SR 3.0.3 allows a 24 hour time period to perform the required surveillance prior to declaring the LCO not met, after discovery of a surveillance not performed in the specified frequency. After discovery of the failure to perform the test on January 2, 1998, the ST was immediately performed with satisfactory results.

Subsequent interviews with Operations shift personnel indicated that the surveillance requirements were performed using alternative methods. SR 3.4.1.2 was satisfied via the daily surveillance log (ST-O-098-01N) and SR 3.4.1.1 was satisfied by means of panel walkdowns and routine operator checks. Parameters on computer printouts during the period also confirmed that SR 3.4.1.1 was acceptable.

Violation 4

On January 1, 1998 during Unit 2 Reactor Startup, the Unit 2 main turbine was inadvertently rolled to a speed of 1400 rpm and it tripped on main oil pump low pressure. The event occurred as reactor power was being raised to 150 pounds. There was no change to reactor power, level or pressure as a result of the event.

On December 31, 1997, I&C technicians completed testing of the EHC system. The testing procedure did not contain restoration guidance and the system was left with the turbine "reset" and "1800 speed" selected. With 150 pounds pressure set selected, shift personnel pulled rods to increase reactor pressure. When the reactor reached 150 pounds, the turbine control valves opened (in an attempt to maintain turbine speed of 1800 RPM and regulate pressure) instead of the turbine bypass valves opening. This resulted in turbine speed slowly increasing over a two hour period. The increase in turbine speed and the turbine rolling off the turning gear occurred directly before shift turnover. The oncoming RO noted the turbine was off the turning gear and notified the Shift Supervisor (SSV). This notification was approximately ten minutes after the turbine had rolled off the gear (1825 hours 1/1/98) and speed was minimal. Although there was indication that the turbine was off the gear, no alarms were received. The oncoming shift completed turnover and continued to pull rod groups to attain three open bypass valves which would place the plant in a more desirable condition for reactor pressure control and minimize reactor water level swings in the 150 pound range. Edge rods were moved and reactor power increase on the Intermediate Range Monitor (IRM) was minimal. At 2000 hours a main turbine lube oil high temperature alarm was received and at 2015 the H2 seal oil/stator water cooling trouble alarm was received. An investigation into the H2 seal oil alarm started and at 2039 the main turbine tripped at 1405 RPM. At this time the following alarms came in, main oil pump discharge low pressure trip, bypass valve open, overspeed trip, main turbine emergency trip and turbine stop/control valve closure.

Violation 5

On June 13, 1995, the calibration check of the Feedwater Inlet Temperature instruments TT 3-2-168 A, B, C & D was performed using measuring and test equipment (M&TE) that was later found out of tolerance. This condition was identified during a scheduled performance of SI3T-2-168-ABCE "Calibration Check of Feedwater Inlet Temperature Instruments TT 3-2-168 A, B, C & D." The "as-found" temperatures for the process computer feedwater temperature setpoints were approximately five degrees Fahrenheit greater than the "as-left" temperatures which caused core thermal power to be calculated approximately 25 MWTH lower than actual power. This correction, when factored into the heat balance calculation, caused core thermal power to be calculated at 100.6 percent (3477 MWTH).

Although the error existed from the time of the performance of SI3T-2-168-ABCE, the effect did not result in the reactor being operated outside of the licensing basis until after the 3R10 refueling outage in October 1996. A review of the last performance of the Surveillance Instruction (SI), which was on June 13, 1995, determined that all four TT's were corrected to read approximately five degrees higher. This is the opposite of the adjustments that were required during the performance of the SI.

Reason(s) For The Violation

Violation 1

The PEP investigation conducted indicated two causal factors, a discrepancy in procedure requirements and control room oversight. A review of Operations Manual requirements, OM-P-3.2 and OM-P-7.1, indicated a difference with respect to responsibilities and requirements of the CRS when moving to other parts of the control room. This difference led to the CRS not being in the control room as permitted by OM-P-3.2 but thereby not acknowledging the expected alarm as required by OM-P-7.1.

Violations 2&3

Two causal factors were identified in the PEP investigation, human performance and clarity of the procedure. In the purpose section of ST-0-02F-560-2 the statement at the end of the purpose section states "Tech Spec SR 3.4.1.2 is also satisfied by this test. If the purpose section were divided into sections where applicable modes of operation, power level and equipment line ups were spelled out it would be clearer and less confusing.

Violation 4

Three apparent causes were identified in the PEP investigation, incomplete procedures, lack of effective plant monitoring, and lack of a questioning attitude by workers. The EHC alignment procedure used by the I&C technicians to perform testing and alignment of the EHC system prior to the plant startup did not include complete restoration steps. This procedure establishes methods for the alignment of the GE turbine generator EHC system. The procedure section of the document is divided into subsections, each of which can be independently performed. A prerequisite to performing a section of the procedure requires the main turbine to be in the tripped condition. Several subsections of this procedure reset the main turbine and require a speed be selected, yet do not require the main turbine to be tripped at the completion of testing. Contributors to this configuration abnormality going unnoticed were the failure to log the configuration changes and failure to ensure that shift management was cognizant of configuration changes that would take place during the testing of the EHC system.

Lack of effective plant monitoring by operations contributed to the event's duration and seriousness. Control room personnel did not effectively monitor EHC panel configuration during this time. When the RO was directed by the general plant procedure to reset the main turbine, he verified that the light was "reset". The RO did not question why the turbine was already reset. Also, he did not verify the "reset" had been performed in accordance with the system operating procedure that was referenced in the general plant procedure.

A lack of questioning attitude by operations personnel when the turbine was first noted off the turning gear was also a contributor to the event. This was a missed opportunity by both shifts to diagnose the cause of the turbine rolling off the gear.

Violation 5

Four causal factors were identified as a result of the investigation conducted. The first was the failure of plant personnel to adequately review test results in June 1995. The technicians, operations and plant staff reviewed the completed SI but the fact that every data point was changed from the as-found condition to a new setting did not alert anyone to the validity of the test. Also, the length of time needed to perform the test did not generate questions concerning problems associated with the results and review of previous test associated with the performance of this SI.

The second factor was that the SI did not adequately indicate the effects the test had on the facility. The precautions and limitations sections of the SI did not identify the changes to temperature transmitters had on core thermal power calculations. Revision 1 of the SI referenced changes to computer points only, therefore the procedure did not alert people involved in the test, operations, plant review staff or the people reviewing the out-of-tolerance report to the impact on plant operations.

The third factor was the inadequate identification of problem measuring and test equipment. M&TE used in the surveillance and repair of permanent plant equipment is required to be identified with repeated adjustments or repairs over its lifetime. The identification of the decade box as having needed repeated repairs should have been noted during calibration review. This heightened review should have resulted in removing decade box #46-0161 from use in the facility.

The last factor was the use of one piece of equipment on all instrumentation used for input to important plant calculations. The use of one piece of test equipment on all trains associated with a particular process has been identified as problematic and does not assure adequate identification of self-induced problems in the facility. The procedure did not identify the impact on the plant or the need to use at least two separate decade boxes to remove the possibility that one piece of defective test equipment can alter plant operating parameters.

Corrective Steps That Will Be Taken To Avoid Further Violations

Violation 1

Each shift team will review this violation and the expectations that there be an SRO present in the main control room at all times and improvement in oversight of main control room activities. Operations Manual OM-P-3.2 is being revised to reflect the expectations that when moving to other areas of the main control room the CRS shall ensure another SRO is present in the "controls area". The revision will also assure that the CRS ensure that the SRO is aware of current plant conditions.

Operations management is conducting a review of the generic concerns with oversight of control room activities. To date, procedure and policy deficiencies have been identified, and changes initiated. Events involving Operations have been investigated and corrective actions implemented and tracked. Any other corrective actions identified as a result of this review will be incorporated in the Operations Manual and "Event Free Ops" Program

Violations 2&3

ST-O-02F-560-2 was immediately performed with satisfactory results. In addition, the learnings from this event were discussed with each operating crew and procedure changes initiated. A procedure change was generated to enhance the "Purpose" section of ST-O-02F-560-2 by providing better guidance to the operators performing the test as to what sections of the test are required to be performed at less than 25 percent power. Also the need for a matrix to assist operations in determining the applicability for SRs during changing power, modes and different equipment line ups is being assessed.

Violation 4

The turbine was verified tripped and placed on the turning gear. Engineering was contacted to evaluate concerns associated with rolling the turbine to 1400 rpm without pre-warming. A temporary procedure change was made to add a step to verify that the turbine is tripped with "all valves closed" selected prior to reactor startup. In addition, the learnings from this event were discussed with each operating crew.

Operation's reactor operator and plant reactor operator turnover sheets now include a verification of control panel system configuration which is required to be independently verified by another operator. Also, equipment operator round sheets now include a verification of in-plant panel system configuration. In addition, an increased awareness has been placed on procedure use.

The EHC alignment procedure (IC-11-00497) was revised to add verification that the main turbine is in the proper configuration at the time of main turbine reset and is prepared for startup and to notify Operations that the EHC alignment is complete. Enhancements to GP-2 were also made.

Violation 5

Reactor power was reduced to 100 percent (3458 MWTH) using recirculation flow. A review of surveillance tests that affect heat balance calculations was performed to determine if other tests were affected by out-of-tolerance test equipment. The equipment identified as being out-of-tolerance did not affect the associated test results. In addition, all test equipment required for surveillance tests for equipment associated with core thermal power calculations were identified, recalibrated and returned to service.

Balance of plant (BOP) systems were reviewed to determine the effects that sustained operation at 100.6 percent reactor power had on the equipment. It was determined that there was no effect since the BOP systems had operated at or below their design parameters. A review was also conducted to determine the effects that operation at 100.6 percent power level had on the reactor vessel internals. The review indicated that the reactor vessel is analyzed to 102 percent therefore the plant was operating within its analyzed conditions.

Date When Full Compliance Was Achieved

Violation #1

The meetings with each shift team to discuss this issue will be completed by June 15, 1998. Revision to Operations Manual OM-P-3.2 has been initiated and will be completed by July 31, 1998. The assessment of oversight of control room activities will be completed by June 30, 1998.

Violation #2

The learnings from the event were discussed with all crews by February 24, 1998. The procedure was revised on May 7, 1998.

Violation #3

The learnings from the event were discussed with all crews by February 24, 1998. The procedure was revised on May 7, 1998.

Violation #4

The GP-2 procedure was revised on March 16, 1998. IC-11-00497 is currently being revised.

Violation #5

All corrective actions associated with this event have been completed and deemed to be effective as of February 17, 1998.



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September 22, 1998

Docket Nos. 50-277
50-278
License Nos. DPR-44
DPR-56

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

Subject: Peach Bottom Atomic Power Station Units 2 & 3
Response to Request For Additional Information to Response to Notice of Violations
(Combined Inspection Report No. 50-277/98-01 & 50-278/98-01)

Gentlemen:

This letter is in response to the telephone call from Mr. D. Florek of USNRC Region 1 requesting additional information regarding our response to the fifth violation that was identified in your letter dated May 7, 1998. This violation concerned exceeding the core thermal power rating for unit 3. Mr. Florek requested information regarding the corrective actions that will be taken to prevent this situation from recurring. The attachment contains information concerning the fifth violation that was previously submitted to the NRC in a letter dated June 3, 1998, in addition to the corrective action information that Mr. Florek requested.

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

John Doering, Jr.
Vice President,
Peach Bottom Atomic Power Station

Attachment
MT/mt

cc: N.J. Sproul, Public Service Electric & Gas
R. R. Janati, Commonwealth of Pennsylvania
H. J. Miller, US NRC, Administrator, Region I
A. C. McMurtry, US NRC, Senior Resident Inspector
R. I. McLean, State of Maryland
A. F. Kirby III, DelMarVa Power/Atlantic Electric

CCN 98-14059

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Restatement of Violation

Facility Operating License DPR-56, Section 2.C.(1) authorizes PECO Energy Company to operate Peach Bottom Atomic Power Station (PBAPS), Unit 3, at steady state reactor core power levels not to exceed 3458 megawatts thermal (100 percent of rated thermal power).

Contrary to the above, PECO Energy Company operated PBAPS Unit 3 at a thermal power in excess of 3458 megawatts between October 22, 1995 and January 21, 1997. PECO Energy Company operated the reactor at a steady state power level up to 100.6% of rated power. This occurred due to errors in the calibration of feedwater temperature instruments in June 1995.

Reason(s) For The Violation

As stated in our original response dated June 3, 1998, miscalibrated feedwater inlet temperature instrumentation resulted in actual plant thermal power exceeding thermal power limits by 0.6 percent. This miscalibration condition existed from June 13, 1995 until discovery on January 21, 1997, but thermal limits were not exceeded until after 3R10 refueling outage in October 1996. The miscalibration resulted from use of an out-of-calibration piece of measuring and test equipment (M&TE) during a routine surveillance test. The "as-found" temperatures for the process computer feedwater temperature setpoints were approximately five degrees Fahrenheit greater than the "as-left" temperatures which caused core thermal power to be calculated approximately 25 MWTH lower than actual power. This correction, when factored into the heat balance calculation, caused core thermal power to be calculated at 100.6 percent (3477 MWTH).

Four causal factors were identified during the plant's investigation of this issue. The first was the failure of plant personnel to adequately review test results in June 1995. The technician's, operation's and plant staff review of the completed surveillance instruction (SI) overlooked the fact that every data point was changed from the as-found condition to a new setting. This should have prompted a more critical review of the test to ensure the results were valid. Also, the length of time needed to perform the test due to problems with test equipment repeatability did not prompt personnel to question the test results.

The second factor was that the SI did not adequately indicate the effects the test had on the facility. The Precautions and Limitations section of the SI did not identify the impact of changes in temperature transmitter calibration on core thermal power calculations. Revision 1 of the SI referenced changes to computer points only and did not adequately alert the procedure user or reviewers as to the importance of these computer point readings. This lack of guidance also influenced personnel reviewing M&TE out-of-tolerance reports to not recognize the impact on actual plant thermal power.

The third factor was the inadequate identification of M&TE that exhibited repetitive problems during M&TE calibration checks. Typically, M&TE used in the surveillance and calibration of permanent plant equipment is required to be identified when repeated adjustments or repairs are performed over its lifetime. The M&TE calibration review should have identified that the decade box used in the feedwater temperature transmitter calibration had frequent and repeated repairs over its lifetime. This review should have also resulted in the removal of the decade box from use in the facility.

The last factor was the use of one piece of M&TE to calibrate all four feedwater temperature transmitters. The use of one piece of test equipment on all trains associated with a particular process has been identified as problematic and does not assure adequate identification of self-induced problems in the facility. The procedure did not identify the impact on the plant or the need to use at least two separate decade boxes to remove the possibility that one piece of defective test equipment can alter plant operating parameters.

Corrective Steps That Have Been Taken And The Results Achieved

Reactor power was reduced to 100 percent (3458 MWTH) using recirculation flow. A review of surveillance tests that affect heat balance calculations was performed to determine if other tests were affected by out-of-tolerance M&TE. No other tests were affected by out-of-tolerance M&TE. In addition, all test equipment required for surveillance tests for equipment associated with core thermal power calculations were identified, recalibrated and returned to service.

Balance of plant (BOP) systems were reviewed to determine the effects of sustained operation at 100.6 percent reactor power on equipment. It was determined that there was no effect since the BOP systems had operated at or below their design parameters. A review was also conducted to determine the effects of operation at 100.6 percent power level on reactor vessel internals. The review indicated that the reactor vessel is analyzed to 102 percent, therefore the plant was operating within analyzed conditions.

Corrective Steps That Will Be Taken To Avoid Further Violations

This event was identified on January 21, 1997 and originally reported in Licensee Event Report (LER) 3-97-01 dated February 19, 1997. Immediate corrective actions were taken at the time of discovery of the event and are included above. In addition, the investigation of this issue identified several future corrective actions that have since been completed. These corrective actions are intended to prevent future recurrence of this type of event and include the following:

- Seventeen surveillance instructions identified as impacting core thermal power were revised to include plant impact statements and the requirement to perform a review when calibration adjustments were made.
- Procedures A-C-138, "Control And Use Of Measuring And Test Equipment," and AG-CG-108, "Response To Report Of Measuring And Test Equipment Out-Of-Tolerance," were reviewed to determine if revisions were required. AG-CG-108 was revised to provide additional detail and expectations as a result of this issue.
- Personnel from the following Peach Bottom and Limerick work groups; Engineering, I & C, NMD, PB Operations, Chemistry, H.P. and Radwaste, reviewed this event. Expectations for the level of review required for surveillance test results was reinforced with personnel and include understanding the impact of instrument adjustments on plant parameters.

Date When Full Compliance Was Achieved

Compliance was achieved on January 21, 1997. All corrective actions associated with this event have been completed and deemed to be effective as of February 17, 1998.