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July 18, 1984

Docket Nos. 50-277  
50-278

EA No. 84-39

Mr. Richard C. DeYoung, Director  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. DeYoung:

By letter dated June 18, 1984, R. C. Young, NRC, to V. S. Boyer, PECO, Philadelphia Electric Company received a Notice of Violation and Proposed Imposition of Civil Penalties EA No. 84-39.

Philadelphia Electric Company agrees with the description of the events contained in your letter and the notice and your indication that the events cited in each of the Violations Assessed a Civil Penalty was identified and properly reported to the NRC by the Company. Philadelphia Electric Company appreciates your recognition of the prompt corrective actions taken by our staff and your mitigation of the Civil Penalty.

A restatement of the violations follows below along with our responses.

## II. Violations Not Assessed a Civil Penalty

### Restatement of Violations II.A, II.B and II.C

"Technical Specification 6.8 and Regulatory Guide 1.33 (November 1972) require implementation of written procedures for troubleshooting, for control of maintenance and for surveillance tests.

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Contrary to the above, written procedures, as required above, were not adequately implemented as evidenced by the following examples:

- A. Administrative Procedure A-26, Revision 23, dated June 24, 1983, Procedure for Corrective Maintenance, requires immediate investigation of plant problems and initiation of a Maintenance Request Form (MRF) for problems that cannot be corrected within eight hours.

However, problems with testing and operating the RWM and RSCS during a plant shutdown on November 17, 1983, were not sufficiently investigated to correct the problem within eight hours, and no MRF was initiated.

- B. Administrative Procedure A-47, Revision 2, dated April 14, 1980, Procedure for the Generation of Surveillance Tests, requires that surveillance test procedure steps which document completion of Technical Specification related surveillance requirements to be indicated with an asterisk. The test results section shall be signed only if all asterisked steps are completed satisfactorily.

Technical Specification Surveillance Requirement 4.3.B.3a states that a group notch mode of RSCS shall be demonstrated to be operable by attempting to move a control rod more than one notch in the first program group after reaching 50 percent rod density on a reactor startup.

However, ST 10.6, Revision 10, dated July 18, 1980, Rod Sequence Control System (RSCS) Function Test, was written and implemented without making the Technical Specification requirement an asterisked step. As a result, completed tests do not contain documentation of the completed Technical Specification surveillance requirement, and they were signed-off as satisfactory.

- C. Surveillance Test Procedure ST 10.5, Revision 11, dated July 18, 1980, RWM Operability Check, requires, in an asterisked step, selection and listing of at

least three rods to verify operability of the RWM rod select error function.

However, on May 28, 1983, ST 10.5 was completed and signed-off as satisfactory when only one rod was listed as having been used to verify the operability of the rod select error function.

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

Response to Violation II.A

The Rod Worth Minimizer (RWM) and Rod Sequence Control System (RSCS) surveillance tests were not satisfactorily completed on November 17, 1983. As authorized by the Technical Specifications, a second licensed operator was assigned to fill the function of the Rod Worth Minimizer. The Rod Sequence Control System surveillance test deficiency was being investigated when the main turbine experienced high vibration and efforts were directed to accelerate the plant shutdown. The plant scrambled shortly thereafter, so the Rod Sequence Control System test could not have been completed even if the problem had been identified. Since both tests could not be completed, the documents were not retained, and because the attention of the control room personnel was focused on the plant shutdown and scram, the Maintenance Request Forms were not initiated.

Both the Rod Worth Minimizer and the Rod Sequence Control system functional tests were performed satisfactorily and no discrepancies were identified prior to reactor startup on November 21, 1983.

On April 10, 1984, a letter was distributed to all Senior Engineers requesting them to remind their personnel that once a surveillance test is begun, the document must be maintained and must eventually be filed in the station files. This letter also reminds personnel that problems which cannot be corrected within 8 hours through the use of plant procedures require the initiation of a Maintenance Request Form.

Response to Violation II.B

This violation was caused by a typographical error.

ST 10.6 - Rod Sequence Control System (RSCS) Functional Test, Revision 8, dated August 11, 1977, was revised on October 13, 1978 to add steps for procedure clarification. When the revision was submitted for typing, the step which demonstrated the operability of the Group Notch mode of RSCS after reaching 50 percent rod density on a reactor startup was indicated with an asterisk. During the typing, however, the asterisk was mistakenly deleted from the procedure step. The step was typed next to the bottom of the page and when the procedure was copied, the sign-off blank was not reproduced on the copy.

Although the step was not identified by an asterisk, the surveillance test requires documentation of additional actions required if other portions of the test do not function properly or if other discrepancies were noted during the performance of the test. If the step failed to produce the expected results, this requirement would identify and document the discrepancy.

ST 10.6 - Rod Sequence Control System (RSCS) Functional Test was revised and retyped on April 10, 1984, to correct the typographical errors identified in this inspection.

In addition, the clerical staff responsible for retyping revised or newly drafted procedures have been given guidance on areas to review when a procedure is typed. The clerical staff has also been instructed to obtain a second proof by the individual who submitted the document for revision prior to distribution of the document.

Response to Violation II.C

This violation was caused by errors incurred during the review of ST 10.5 after its completion. Individuals performing the test review failed to note that two control rods were not documented on the surveillance test. The operator performing the test selected three control rods to verify operability of the Rod Worth Minimizer rod select error function, but neglected to record two of three rods he selected on the procedure.

The operator who performed the test has been counseled on the importance of fully completing surveillance tests. The individuals who performed the review for this surveillance test have since left Philadelphia Electric Company for reasons unrelated to this error.

In addition, ST 10.5, RWM Operability Check, was revised on November 8, 1983, to make the need for data entry on the surveillance test more obvious to the individual performing the test, and more obvious to the individual reviewing the completed document.

I. Violations Assessed a Civil Penalty

Restatement of Violation I.A

"Technical Specification 3.6.A.1 requires that the average rate of change of reactor coolant temperature not exceed 100 degrees F in any one-hour period during normal heatup or cooldown.

Contrary to the above:

1. During the heatup of Unit 3 on January 24, 1984, between 9:15 a.m. and 10:15 a.m. and between 9:30 a.m. and 10:30 a.m., the average rate of change (average over an hour) of the reactor coolant temperature, as indicated on the B recirculation loop temperature recorder, exceeded 100 degrees F per hour. The actual temperature changes over the respective one-hour periods were 102 degrees F and 111 degrees F.
2. During heatup of the Unit 2 reactor, on January 31, 1984, between 4:20 a.m. and 5:20 a.m., the reactor coolant temperature, as indicated by the A and B Recirculation Loop temperature traces, increased 110 degrees F.

Violation I.A. has been categorized with Violation I.B and Violation I.C as a Severity Level III problem (Supplement I).

(Civil Penalty - \$30,000 distributed equally among the violations)."

Response to Violation I.A

This violation was caused by personnel error.

During the startup of the Unit 3 reactor on January 24, 1984, operator trainees under the supervision of Reactor Operator were recording and calculating the reactor coolant temperature changes in accordance with ST 9.12 (Reactor Vessel Temperatures). The Reactor Operator's review of the Surveillance Test data identified the calculation errors.

The immediate action taken by the Reactor Operator was to reduce the heatup rate.

The Reactor Operator, the Utility Reactor Operator involved with the startup, and the Shift Supervisor each received disciplinary action for their lack of attention to detail.

During startup of the Unit 2 reactor on January 31, 1984, a reactor operator, while performing ST 9.12 (Reactor Vessel Temperatures), noted that the heatup rate was exceeding the Technical Specification limit. In responding to this event, the operator failed to take adequate corrective action rapidly enough to prevent reactor coolant temperature from rising by more than 100 degrees Fahrenheit within a one-hour period.

The Reactor Operator, the Utility Reactor Operator involved in the startup, and the Shift Supervisor have each received disciplinary action for their lack of attention to detail.

A letter from the Station Superintendent to all Licensed Operators was distributed on April 10, 1984 to discuss the heatup rate Technical Specification violations, clarify operator responsibilities, and to further express management's commitment to procedure compliance. This letter was attached to the April 10, 1984 shift meeting notes and reviewed during shift meetings to ensure that all operations personnel were aware of its contents.

Restatement of Violation I.B

Technical Specification 3.6.A.2, Thermal and Pressurization Limits, and Figure 3.6.2, prohibit reactor

vessel pressurization above atmospheric pressure at vessel temperatures below 120 degrees F.

Contrary to the above, for approximately five minutes at about 5:30 p.m. on January 25, 1984, the Unit 3 reactor vessel was pressurized above atmospheric pressure to about 10 psig, and at the time, the reactor vessel temperature was below 120 degrees F. (about 110 degrees F).

Violation I.B. has been categorized with Violation I.A. and Violation I.C. as a Severity Level III problem (Supplement I).

(Civil Penalty - \$30,000 distributed equally among the violations)."

#### Response to Violation J.B

The event was caused by personnel error. (Failure to follow procedures)

On January 25, 1984, Peach Bottom Atomic Power Station Unit 3 was in a cold shutdown condition. Upon completing maintenance on the reactor feed pump bypass valve, the permits were cleared and the system was set up for long path recirculation (feedwater system flush to the condenser). In setting up the feedwater system for long path recirculation, the operator failed to close the feedwater inlet valves to the reactor vessel as required in system procedure S.7.1.D. With a condensate pump in service, the operator opened the 5th heater outlet valve with the feedwater inlet valves open to the reactor vessel, thereby injecting condensate into the reactor vessel. Reactor vessel level increased approximately six feet and a minimal pressure increase was noted in the wide range reactor pressure strip chart recorder (PR-3-06-96). This pressure increase was estimated to be less than 10 psi, since the pen movement was much less than half of a 20 psig increment on the chart (0-1500 psi).

As a corrective measure, the responsible operator received specific counseling on the importance of following procedures.

In addition, this event was discussed in detail during shift meeting.

As a further corrective action, the station superintendent directed the operations engineer to emphasize to the operators at shift meetings of the importance of following the approved written procedures of the plant, and that operators are required to know and use those procedures applicable to their day-to-day work.

Restatement of Violation I.C

"Technical Specification 3.3.C.3 specifies that the maximum scram time for 90 percent insertion of any operable control rod shall not exceed 7.0 seconds. Technical Specification 3.3.A.2.C specifies that control rods with scram times greater than those specified in Technical Specification 3.3.C.3 shall be considered inoperable.

Contrary to the above, on November 17, 1983, control rod 34-27 had a scram time of greater than 12 seconds, as indicated on a strip chart recorder, but this condition was not recognized at that time and the control rod was not considered inoperable until a subsequent reactor scram on January 14, 1984.

Violation I.C. has been categorized with Violation I.A. and Violation I.B as a Severity Level II problem (Supplement I).

(Civil Penalty - \$30,000 distributed equally among the violations)."

Response to Violation I.C

The event was caused by a failure of personnel to recognize and interpret the information displayed on the scram insertion time recorders as required by procedure ST 10.9, specifically Surveillance Requirement 4.3.C.2.

The corrective action taken was to modify the procedure for scram time testing by including samples of timing traces of control rods that fail to scram, control rods that scram from various positions, and control rods with acceptable scrams to the procedure.

In addition, the operators have been instructed to use a computer program to monitor all control rod positions following a controlled manual scram.

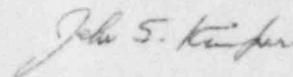
Conclusion

We believe that Philadelphia Electric Company has acted responsibly and expeditiously in reporting events, investigating and analyzing the cause of each event, performing corrective actions and, where possible, implementing measures to prevent recurrence. Philadelphia Electric Company recognizes your reduction of the base civil penalty as an acknowledgement of our responsiveness. Although we believe the imposition of a civil penalty is not the proper vehicle for promoting improved performance, we hereby enclose a check in the amount of \$30,000 as payment of the imposed civil penalties.

In addition to discussing each of the aforementioned violations, your letter of June 18, 1984, included an Order Modifying License, Effective Immediately. At the present, our management has reviewed your Order Modifying License and is preparing a plan in conformance with the order. In accordance with the instructions in your order, the Region I Administrator should anticipate receipt of our plan for his appraisal by August 17, 1984.

If we can provide further information, please contact us.

Very truly yours,



Attachment

cc: Dr. T. E. Murley, Administrator  
Mr. A. R. Blough, Site Inspector