PHILADELPHIA ELECTRIC COMPANY

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July 23, 1984

Docket No. 50-278

Dr. Thomas E. Murley, Administrator
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

SUBJECT: Peach Bottom Atomic Power Station - Unit 3
Moisture Monitoring System

Dear Dr. Murley:

This letter is a report of moisture monitoring system inoperability in accordance with Philadelphia Electric Company's commitment to report moisture monitoring system problems and alarms unrelated to actual system leakage as stated in letter, J. S. Kemper, PECo, to Dr. T. E. Murley, USNRC, dated September 15, 1983.

Reference:	Docket No. 50-278
Report Number:	MM-3-01
Revision No.:	00
Event Date:	June 22, 1984
Report Date:	July 23, 1984
Facility:	Peach Bottom Atomic Power Station RD #1, Box 208, Delta, PA 17314

ABSTRACT

On June 22, 1984, with Unit 3 operating at 42% power, routine surveillance testing indicated a moisture sensor in the recirculation system moisture monitoring system was functioning improperly. On June 25, 1984, an additional sensor was found to be functioning improperly. Hourly monitoring of the drywell sump pump out rates is being performed until the sensors can be replaced or repaired during the next outage of sufficient duration to carry out the work.

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DESCRIPTION OF THE EVENT

On June 22, 1984, with Unit 3 operating at 42% power, routine surveillance testing (ST 13.40, "Checkout of Moisture Monitoring System") to verify the operability of the recirculation system moisture monitoring system indicated that Point 23 had failed. Point 23 is installed on weld 2-AD-12 in the 28-inch recirculation pump discharge piping.

On June 25, 1984, with Unit 3 operating at 85% power, the moisture monitoring system display in the control room indicated a moisture alarm and a trouble alarm. Investigation determined that the alarms originated from Point 7. Point 7 is installed on weld 10-0-5 in the 20-inch residual heat removal system suction piping. Remote testing of the sensor at Point 7 indicated that the moisture alarm and trouble alarm was triggered by the failure of the sensor.

Following the identification of the sensor failure of Point 7, the moisture monitoring system was removed from service.

CONSEQUENCES OF THE EVENT

After the system was removed from service, enhanced surveillance requirements (ST 13.41, "Hourly Drywell Leak Detection") were initiated and will be continued until an outage of sufficient duration to make the system operable. The purpose of ST 13.41 is to provide early warning of reactor coolant leakage via the drywell sump collection system when the moisture monitoring system is inoperable and reactor temperature is above 212 degrees. These surveillance requirements ensure that drywell leakage rates do not exceed the limits of Technical Specification 3.6.C.1. Therefore, the safety consequences of this event are considered minimal.

CAUSE OF THE EVENT

The cause of the event will be determined during the next unit outage of sufficient duration with the drywell deinerted.

CORRECTIVE ACTIONS

Hourly monitoring of the drywell sump collection system is being performed until the next unit outage of sufficient duration with the drywell deinerted so that these sensors can be made operable. Additionally, the system is restored to operable status once per day to perform ST 13.40, "Checkout of

Moisture Monitoring System", as an additional surveillance requirement on all but the two inoperable sensors.

PREVIOUS SIMILAR OCCURRENCES

LER 2-83-26/3L, 3-83-16/3L, 3-83-21/3L, 3-83-24/3L letter: W. T. Ullrich, PECo, to Dr. T. E. Murley, USNRC, dated March 5, 1984, and letter: W. T. Ullrich, PECo, to Dr. T. E. Murley, USNRC, dated March 23, 1984.

Very truly yours,

Superintendent
Nuclear Services

cc: A. R. Blough, Site Inspector
J. F. Stolz, Operating Reactors Branch #4