DESIGNATED ORIGINAL

Certified By mal

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION
R. D. 1, BOX 208
DELTA, PENNSYLVANIA 17314

January 28, 1983

Mr. R. C. Haynes
Administrator
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

SUBJECT: REPORTABLE OCCURRENCE - PROMPT NOTIFICATION

Confirming J. F. Mitman's telephone conversation with A. R. Blough, Region I, United States Nuclear Regulatory Commission on 1/26/83.

Reference: Docket No. 50-278
Peach Bottom Unit 3
Technical Specification 3.5.C and 3.7.D.2

Report No. 3-83-2/1P
Occurrence Date: 1/26/83

Identification of Occurrence:

At approximately 9:30 p.m. on 1/26/83, during local leak rate testing of a containment isolation valve (MO-5244) associated with the HPCI turbine exhaust line vacuum breaker, the valve failed to fully close. A manual valve in the same line was closed, the HPCI System was declared inoperable, and surveillance testing of appropriate ECCS equipment was initiated as required by the Technical Specifications. When the RCIC System was tested, the turbine throttle valve reset motor tripped during the portion of the surveillance test that checks remote throttle valve reset capability. A shutdown was initiated in response to Technical Specification requirements. Following replacement of the throttle valve motor thermals, valve and RCIC operability was re-established, the shutdown was terminated, and reactor power was recovered to maximum capability.

Because the resident NRC Inspector had been promptly notified of the HPCI vacuum breaker isolation valve problem, the later problem with the RCIC throttle valve was inadvertently not reported to the resident inspector nor was the NRC Operations Center notified.

Conditions Prior to Occurrence:

Unit 3 operating at its maximum capability during EOL coast-down (approximately 660 Mwe).

IE-04

Apparent Cause of Occurrence:

Routine leak rate testing of the HPCI vacuum breaker isolation valve MO-5244 indicated that the valve limitorque operator prevented the valve from closing fully. Following valve operator dismantling, the cause of the improper operation was determined to be solidified lubricant in the valve operator.

During the surveillance test of the RCIC System, the throttle valve is tripped and reset. During the relatching of the valve, the thermal overloads on the valve motor tripped. These thermal overloads were replaced and the valve was stroked satisfactorily. Later on 1/27/83, the valve stem was lubricated and proper operation of the latching mechanism and valve motor again verified.

Analysis of Occurrence:

When the HPCI vacuum breaker isolation valve was identified as being unable to close, an in-line manual isolation valve was closed to maintain containment integrity. The second isolation valve in this penetration is the HPCI exhaust line check valve which was operable during this period. With the vacuum breaker line isolated, the HPCI System is, in fact, operable. However, if it is cycled on and off, there is a potential for water to enter the turbine exhaust line creating a significant back pressure on the turbine on the successive starts. In any case, the initial operation of the HPCI turbine would not be affected.

The motor operated vacuum breaker isolation valve MO-5244 is normally open. It is automatically closed if primary coolant pressure is below 100 psig and drywell pressure is above 2 psig. This operation isolates the torus air space from the HPCI turbine exhaust line during periods when HPCI operation is not required. It will also permit torus water to seal the HPCI exhaust line check valve after HPCI operation is no longer required.

Failure of this vacuum breaker isolation valve to fully close has minimal safety significance because the in-line check valve was operable and in a closed condition. Continued operation of the unit with the manual valve closed in the vacuum breaker line is conservative because HPCI was maintained in an operable condition at least for the first start, but was declared inoperable based on Technical Specification requirements.

As indicated above, RCIC was tested due to declaring the HPCI inoperable. The throttle valve on RCIC is normally in an open position. Therefore, RCIC was capable of starting automatically and operating properly. However, if the RCIC had tripped during this operation, it could not have been re-started from the control room. The problem was identified during the valve stroking portion of the surveillance test. The valve was declared inoperable for approximately 30 minutes. During this time, the thermal overloads were replaced and the valve was satisfactorily stroked to verify operability.

Corrective Action:

As indicated above, immediate corrective action was taken when the vacuum breaker motor operated isolation valve failed to close by closing an in-line manual valve and declaring the HPCI inoperable. Surveillance testing for other ECCS systems was initiated at that time. On 1/27/83 the HPCI motor operator was repaired. Hardened lubricant was removed and new lubricant applied. The limit switches and torque switches were checked and realigned. A successful local leak rate test was performed late on 1/27/83.

As indicated above, the RCIC throttle valve was returned to an operable status within 30 minutes of the failure by replacing the thermal overloads. Further preventive maintenance was performed on 1/27/83 by lubrication of the valve stem and additional stroking.

To enhance licensed operators' knowledge of reporting requirements, a portion of the licensed operator requalification program will be dedicated to this subject during the second requalification lecture cycle.

Previous Occurrence:

None.

Very truly yours,

W. T. Ullrich
Station Superintendent