

PHILADELPHIA ELECTRIC COMPANY

LIMERICK GENERATING STATION

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J. DOERING, JR.
PLANT MANAGER
LIMERICK GENERATING STATION

April 23, 1992

Mr. Robert Bauer, Jr.
Department of Environmental Resources
Bureau of Water Quality Management
Suite 6010, Lee Park
555 North Lane
Conshohocken, PA 19428

Subject: Noncompliance with NPDES Permit No. PA-0051926,
Limerick Generating Station; Cooling Tower Blowdown
Manhole Overflow to Possum Hollow Creek

Dear Mr. Bauer:

DESCRIPTION OF THE EVENT

On March 22, 1992, a noncompliance of the NPDES permit for the Limerick Generating Station occurred after Unit 1 Cooling Tower basin drain water in conjunction with Unit 2 Cooling Tower blowdown water was discharged into the Possum Hollow Creek resulting in an unpermitted discharge. This condition resulted in the release of chemically treated water from an unmonitored discharge point.

On March 21, 1992, System (S) Operating Procedure S09.4.A, "Cooling Tower and Circulating Water System Drain," was being implemented by operations personnel in conjunction with a clearance application on the circulating water system. At 2300 hours, on March 21, 1992, the Unit 1 Cooling Tower basin drain valve, 09-1001, was opened to begin draining the Unit 1 Cooling Tower basin into the blowdown line. Additionally at 2300 hours, the Unit 2 Cooling Tower blowdown was being maintained at a flow of 5,200 gpm. On March 22, 1992, at approximately 0130 hours, operations personnel discovered water discharging from a manhole on the Cooling Tower blowdown line and flowing directly into the Possum Hollow Creek. Main Control Room (MCR) personnel were unaware of the excessive blowdown flow rate because the drain line from the Unit 1 Cooling Tower basin connects into the blowdown line downstream of the flow element for the MCR flow recorder, FR-09-201. Flow recorder FR-09-201 records and monitors Cooling Tower blowdown flow rates and not Cooling Tower basin drain flow rates. At 0215 hours, operations personnel reduced the Unit 2 Cooling Tower blowdown flow and secured the Unit 1 Cooling Tower basin drain to terminate the overflow from the manhole. The system engineer later estimated approximately 350,000 gallons of circulating water was discharged into the

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Possum Hollow Creek. The combination of the Unit 1 Cooling Tower basin drain flow and the Unit 2 Cooling Tower blowdown flow, resulted in exceeding the Cooling Tower blowdown line capacity.

The chemical makeup of the water discharged into the Possum Hollow Creek was analyzed on March 22, 1992. The pH of the discharge was approximately 7.7, total zinc concentration was 0.7 ppm, and the PECO 5 usage rate for the Unit 2 Cooling Tower was being maintained at 806.4 lbs/day. All values were within permit limits.

CAUSE OF THE NONCOMPLIANCE

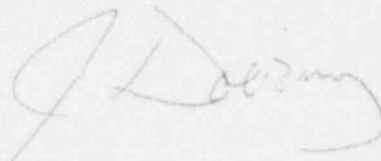
The cause of the noncompliance was procedure deficiency in that the System operating procedure S09.4.A failed to take into consideration the capacity of the Cooling Tower blowdown line. Guidance was not present to remind operations personnel that the Cooling Tower drain flow bypasses the blowdown flow element. This allowed the blowdown line capacity to be exceeded through the combination of Unit 1 Cooling Tower basin drain flow and Unit 2 Cooling Tower blowdown flow.

PREVENTION OF FUTURE OCCURRENCES

The following corrective actions will be implemented to prevent the recurrence of a similar event.

1. System operating procedure S09.4.A is expected to be revised by May 1, 1992, to provide sufficient procedural guidance to ensure that operations personnel closely monitor and control this evolution. This procedural guidance will warn operations personnel that Cooling Tower basin drain flow indication does not exist, and the subsequent importance of properly controlling Cooling Tower basin draining.
2. A review of other applicable system operating procedures will be performed to determine if other similar deficiencies exist. This review is expected to be completed by May 1, 1992, and appropriate actions will be implemented as necessary.
3. An engineering evaluation will be performed to determine if the blowdown and basin drain designs for the Cooling Towers can be improved or modified. This evaluation is expected to be completed by September 30, 1992.

Sincerely,

A handwritten signature in dark ink, appearing to be "J. D. [unclear]", written in a cursive style.

cc: U.S. Nuclear Regulatory Commission
Document Control Desk
Docket Nos. 50-352/50-353
Washington, D.C. 20555

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Administrator, Region I, USNRC
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