U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-277/79-14
50-278/79-16

Docket No. 50-277
50-278

License No. DPR-44
DPR-56 Priority - Category C
C

Licensee: Philadelphia Electric Company

2301 Market Street

Philadelphia, Pennsylvania 19101

Facility Name: Peach Bottom Atomic Power Station, Units 2 & 3

Inspection at: Delta, Pennsylvania

Inspection conducted: June 22, 1979

Inspectors: G P Yuhas for
J. A. Serabian, Radiation Specialist — 9-20-79 date signed

G.P Yuhas for
T. J. Jackson, Radition Specialist (Intern) — 9-20-79 date signed

date signed

Approved by: J. P. Stohr, Chief, Radiation Support Section — 9/20/79 date signed

Inspection Summary:
Inspection on June 22, 1979, (Combined Report Nos. 50-277/79-14 and 50-278/79-16)
Area Inspected: Special, unannounced inspection by regional based inspectors to follow up Licensee Event Report 3-79-20/IT. The inspection involved 11 inspector-hours onsite by two NRC regional based inspectors.
Results: One apparent item of noncompliance was identified (infraction-failure to adhere to Technical Specifications regarding release rates), Paragraph 2a.

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Region I Form 12
(Rev. April 77)

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## DETAILS

1. Persons Contacted

**W. T. Ullrich, Station Superintendent
R. S. Fleischmann, Assistant Station Superintendent
*W. Knapp, Supervising Engineer, Generating Division, Nuclear
**W. H. Barley, Health Physics Engineer
**M. Sullivan, Health Physics Staff Assistant
**R. L. Scholz, Engineer of Chemistry

*denotes those persons present at the exit interview on June 21, 1979.
**denotes those persons present during telephonic discussions on July 20, 1979.

2. Reportable Occurrence

References:

(a) Licensee Event Report 3-79-20/IT dated July 6, 1979.

(b) Letter to B. H. Grier, Director, Region I, from Mr. J. Cooney Superintendent - Generation Division - Nuclear, dated July 6, 1979.

a. Event

Reference (a) describes an occurrence on June 21, 1979, in which the release rate of gross activity (excluding halogens and particulates with half lives longer than eight days) from the site stack and reactor vents exceeded the requirements of Technical Specification 3.8.C.1 for approximately ten minutes.

Technical Specification 3.8.C.1 indicates that the site release rate of gross activitiy except for halogens and particulates with half lives longer than eight days shall not exceed:

$$\frac{Q_S \bar{E}}{0.24} + \Sigma \frac{Q_{iv}}{2.0 \times 10^5 \, MPC_i} \leq 1$$

where:

$Q_s$ = combined units 2 & 3 off gas stack release rate in Ci/sec.

$\bar{E}$ = average $\gamma$ energy of release in Mev.

$Q_{iv}$ = combined units 2 & 3 release rate in Ci/sec from reactor building ventilation exhaust stack.

$MPC_i$ = as defined for radionuclide i in column 1, Table II of Appendix B 10CFR20 assuming a 10 minute old off gas mixture.

The inspector found that for a ten minute period (at ~ 5:00 P.M. on June 21, 1979) the off gas stack release value was 1.06 times the release limit, while the reactor building ventilation exhaust value was 0.11 times the limit, resulting in a total release value of 1.17 times (or 117% of) the technical specification site release limit specified in Section 3.8.C.1. The inspector noted that this release constituted noncompliance with Technical Specification 3.8.C.1. (50-277/79-14-01; 50-278/79-16-01).

b. Onsite Analyses

The licensee removed and analyzed the charcoal filter cartridge used to monitor the stack exhaust to determine the amount of I-131 activity released during the ten minute period. Licensee calculations indicate a value of $6.9 \times 10^{-3}$ percent of the applicable technical specification limit (Section 6.8.C.2) for I-131. Other analyses indicated that (~ 98%) the release consisted primarily of Xe-133 and Xe-135.

c. Offsite Analyses

In addition to onsite analyses, offsite sampling and analyses were also conducted. Milk samples were taken from two local farms over the period of June 21, 22, 24 and 25. Grass and water samples were taken north of the site (the direction which meteorological data indicate that the plume would travel at the time of the release). Samples were analyzed either at the U.S. Nuclear Regulatory Commission's laboratory facility (Region I) or at the U.S. Department of Energy's laboratory facility (Idaho Falls, Idaho). The results are presented in Table I and do not indicate the presence of I-131.

TABLE I

Results of Offsite

Environmental Samples

| Sample | Result ($\pm$ 1 $\sigma$) | Date Sampled |
|---|---|---|
| 1. Milk# (Farm D) | -2 $\pm$ 4E-10 | 6/21-22 |
| 2. Milk# (Farm D) | 1 $\pm$ 3E-10 | 6/25 |
| 3. Milk# (Farm L) | 6 $\pm$ 4E-10 | 6/22 |
| 4. Milk# (Farm L) | -5 $\pm$ 5E-10 | 6/24-25 |
| 5. Grass (4 samples total) | <MDA | 6/21 |
| 6. Water | <MDA | 6/21 |

#Samples decay corrected as of noon on June 27, 1979. Analyzed for I-131 only.

*Random uncertainties reported are 1 standard deviation, 1 $\sigma$. Small negative and other results $\leq 2\ \sigma$ are interpreted as including "zero" or as not detected. MDA denotes minimum detectable activity.

On June 23, 1979, the licensee collected the environmental thermoluminescent dosimeters (ahead of the normal schedule) for readout. The results did not indicate any readily discernable change from the normal trend. NRC calculations indicate that the whole body dose to an individual located at the site boundry throughout the total release period (50 minutes, the technical specification was exceeded for ten minutes of this) would be less than 0.1 mRem.

A full narrative description of the occurrence is contained in reference (b).

3. Exit Interview

The inspector met with the licensee management representative (denoted in Paragraph 1) at the conclusion of the inspection on June 22, 1979. Further telephonic discussions were held with licensee management representatives on July 20, 1979. The inspector reviewed the scope and findings of the inspection.