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IE FILE COPY


NJK-76-382

October 13, 1976

J. Keppler, Regional Director
Office of Inspection and Enforcement
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Reference: Quad-Cities Nuclear Power Station, Units 1 and 2
Docket Nos 50-254 and 50-265, DPR-29 and DPR-30
Appendix A, Sections 3.8.G and 6.6.B.1.b.

Enclosed please find Reportable Occurrence Report No. RO 50-254/76-32 for Quad-Cities Nuclear Power Station. This occurrence was previously reported to Region III, Office of Inspection and Enforcement by telephone on October 1, 1976 and by telecopy on October 4, 1976.

This report is submitted to you in accordance with the requirements of Technical Specification 6.6.B.1.

Very truly yours,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

N. J. Kalivianakis
Station Superintendent

NJK/SRH/lk

cc: G. A. Abrell

10974

# LICENSEE EVENT REPORT

CONTROL BLOCK: [ ] (1–8)

**(PLEASE PRINT ALL REQUIRED INFORMATION)**

| 1 | 2 | LICENSEE NAME (9–14) | LICENSE NUMBER (15–25) | LICENSE TYPE (26–30) | EVENT TYPE (31–32) |
|---|---|---|---|---|---|
| 0 | 1 | ILQAD1 | 00-00000-00 | 4 | 11 | 1 | 1 | 1 | 01 |

| 1 | 2 | CON'T | CATEGORY (57–58) | REPORT TYPE (59) | REPORT SOURCE (60) | DOCKET NUMBER (61–68) | EVENT DATE (69–74) | REPORT DATE (75–80) |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | | | T | L | 05000-254 | 10 | 01 | 76 | 10 | 13 | 76 |

EVENT DESCRIPTION

02 On October 1, 1976, it was determined that the plant Main Chimney Monitoring System

03 and the Reactor Building Vent Sample Systems had not been functioning properly for a

04 period of time, as indicated by a review of recent problems. On September 19, 1976,

05 while replacing the iodine cartridge and particulate filter on the Main Chimney

06 Sample System, the Radiation Chemistry Technician noticed that the flexible sample

| 07 | SYSTEM CODE (10) | CAUSE CODE (11) | COMPONENT CODE (12–17) | PRIME COMPONENT SUPPLIER (43) | COMPONENT MANUFACTURER (44–47) | VIOLATION (48) |
|---|---|---|---|---|---|---|
| | MC | E | ZZZZZZ | N | Z999 | N |

CAUSE DESCRIPTION

08 (Proximate Cause-Equipment Failure) The apparent cause of this occurrence is failure

09 of flexible suction hoses on the sample pumps. Daily flexing of these hoses, each

10 time samples are removed and cartridges and filters are replaced, had caused the hoses

to crack and leak.

| 11 | FACILITY STATUS (9) | % POWER (10–12) | OTHER STATUS (13–44) | METHOD OF DISCOVERY (45) | DISCOVERY DESCRIPTION (46–80) |
|---|---|---|---|---|---|
| | E | 096 | NA | B | NA |

| 12 | FORM OF ACTIVITY RELEASED (9) | CONTENT OF RELEASE (10) | AMOUNT OF ACTIVITY (11–44) | LOCATION OF RELEASE (45–80) |
|---|---|---|---|---|
| | Z | Z | NA | NA |

PERSONNEL EXPOSURES

| 13 | NUMBER (9–11) | TYPE (12) | DESCRIPTION (13–80) |
|---|---|---|---|
| | 000 | Z | NA |

PERSONNEL INJURIES

| 14 | NUMBER (9–11) | DESCRIPTION (12–80) |
|---|---|---|
| | 000 | NA |

OFFSITE CONSEQUENCES

15 NA

LOSS OR DAMAGE TO FACILITY

| 16 | TYPE (9) | DESCRIPTION (10–80) |
|---|---|---|
| | Z | NA |

PUBLICITY

17 NA

ADDITIONAL FACTORS

18 (EVENT DESCRIPTION-CONTD) hose was malformed from use, and suspecting a possible

19 leak in the hose, he wrapped it with tape. Consequently, the Main Chimney Iodine-131

NAME: Stephen R. Hopewell PHONE: 309-654-2241 ext. 233

GPO 881-667

ADDITIONAL FACTORS

Event Description Cont'd

concentration was shown to have increased from 5.46 X $10^{-12}$ uci/cc on September 18, 1976 to 1.77 X $10^{-10}$ uci/cc on September 19, 1976.

On September 23, 1976, a technician noticed a discrepancy in the radioactive iodine and particulate concentrations between the Unit One Reactor Building Vent Continuous Air Monitor (CAM) and the Unit One Reactor Building Vent Sampling System results. It was suspected that a problem similar to that experienced on the main chimney sampler may have occurred.

Although the exact point in time at which the hoses failed could not be determined, a review of the records of both the Main Chimney and Unit One Reactor Building Vent Sample Systems results did provide some indication of the failure date.

A review of the main chimney sample data indicated that the samples may have been non-representative as early as July 21, 1976. Estimates of main chimney releases can be made by comparing previous data to off-gas measurements and Steam Jet Air Ejector Monitor data. There were no plant transients during the period in question which may have led to a release in excess of Technical Specification limits. Furthermore, the other monitors in the off-gas system and periodic off-gas samples indicated that no abnormally high levels of radioactivity in the Off-Gas System existed during the period. Considering this and the fact that the main chimney samples normally run at only a fraction of a percent of the limit, it was concluded that the possibility that the release limit was approached was extremely small.

By comparing Unit One Reactor Building Vent Sample activities with the Unit One Reactor Building Vent CAM activities, it was determined that the sample system had not been functioning properly since approximately September 13, 1976. Continuous Air Monitor samples and readings taken from the Reactor Building Vent Noble Gas Monitor during the period that the vent sampler was malfunctioning, indicate no radiation levels which could have caused a release in excess of the Technical Specification limit.

Based on reviews of the associated monitor data and plant operations during the period of the malfunctions, there were no apparent abnormal releases of radioactivity during that period. Thus, there was no effect on the health and safety of the public as a result of this occurrence. (RO 50-254/76-32)

Corrective Action to Prevent Recurrence

A work request was written for repair of the main chimney sample system on September 21, 1976 and the flexible suction hose was replaced on September 22, 1976.

A work request was written for repair of the Unit One Reactor Building Vent Sampler on September 23, 1976. The leak was located on September 28, and the suction hose was replaced on the same day.

A change will be made to the procedure for removal of the iodine cartridges and particulate filters on the Main Chimney and Reactor Building Vent Sampling Systems such that after a new iodine cartridge and particulate filter is installed, a vacuum check of the system will be made. This will be done by closing the suction valve on the sample pump and checking the vacuum reading. Satisfactory vacuum indicates that the sample system is intact.

Failure Data

A broken flexible hose was previously experienced on the Unit Two Reactor Building Vent Sample System on March 9, 1974. The availability of the Continuous Air Monitor also minimized the consequences of that occurrence. With time and use, the flexible hoses can be expected to develop cracks and leaks. Early detection, repair, and the availability of backup monitoring systems mitigate the safety implications of occurrences of this type.