NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | LICENSEE CODE: I L Q A D 1 (2) | LICENSE NUMBER: 0 0 0 - 0 0 0 - 0 0 0 (3) | LICENSE TYPE: 4 1 1 1 1 (4) | CAT (5)

CON'T 0 1 | REPORT SOURCE: L (6) 0 | DOCKET NUMBER: 0 0 0 0 2 5 4 (7) | EVENT DATE: 1 2 2 9 8 3 (8) | REPORT DATE: 0 1 2 5 8 4 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On December 29, 1983, results of the Chimney Effluent Radionuclide Analysis were
0 3 found to be substantially less than normal. An inspection revealed that the chimney
0 4 sample line was plugged, rendering the Chimney Gas Sample System inoperable. A GSEP
0 5 Unusual Event was declared, and load was held steady as required by Technical
0 6 Specification 3.8.G.2. The Turbine Building and Off-Gas samples were used to
0 7 determine release rates. The Off-Gas radiation monitors were operable and capable of isolating the Off-Gas System. Therefore, the safety consequences of this
0 8 event were minimal.

0 9 | SYSTEM CODE: B B (11) | CAUSE CODE: E (12) | CAUSE SUBCODE: B (13) | COMPONENT CODE: I N S T R U (14) | COMP SUBCODE: X (15) | VALVE SUBCODE: Z (16)

(17) LER/RO REPORT NUMBER | EVENT YEAR: 8 3 | — | SEQUENTIAL REPORT NO.: 0 4 8 | / | OCCURRENCE CODE: 0 3 | REPORT TYPE: L | — | REVISION NO.: 0

ACTION TAKEN: F (18) | FUTURE ACTION: Z (19) | EFFECT ON PLANT: Z (20) | SHUTDOWN METHOD: Z (21) | HOURS (22): 0 0 0 0 | ATTACHMENT SUBMITTED: Y (23) | NPRD-4 FORM SUB.: N (24) | PRIME COMP. SUPPLIER: N (25) | COMPONENT MANUFACTURER: Z 9 9 9 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 Extreme sub-zero temperatures apparently caused the power cable to the sample line
1 1 heat-tracing to break. Moisture in the sample line eventually caused ice blockages
1 2 in the two sections of sample line exposed to the outside environment. The power
1 3 cable was replaced, and additional heat-tracing and insulation was installed. The sample system was declared operable at 6:03 p.m. on December 30, 1983. This action
1 4 is deemed adequate to prevent further occurrences.

1 5 | FACILITY STATUS: E (28) | % POWER: 0 9 8 (29) | OTHER STATUS (30): NA | METHOD OF DISCOVERY: B (31) | DISCOVERY DESCRIPTION (32): Routine Gaseous Sampling

1 6 | ACTIVITY RELEASED: Z (33) | CONTENT OF RELEASE: Z (34) | AMOUNT OF ACTIVITY (35): NA | LOCATION OF RELEASE (36): NA

PERSONNEL EXPOSURES
1 7 | NUMBER: 0 0 0 (37) | TYPE: Z (38) | DESCRIPTION (39): NA

PERSONNEL INJURIES
1 8 | NUMBER: 0 0 0 (40) | DESCRIPTION (41): NA

LOSS OF OR DAMAGE TO FACILITY (43)
1 9 | TYPE: Z (42) | DESCRIPTION: NA

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PUBLICITY
2 0 | ISSUED: N (44) | DESCRIPTION (45): NA | NRC USE ONLY

NAME OF PREPARER S Reynolds PHONE 309-654-2241, ext 177

I. LER Number: LER/RO 83-48/03L-0

II. Licensee Name: Commonwealth Edison Company
Quad-Cities Nuclear Power Station

III. Facility Name: Unit One

IV. Docket Number: 050-254

V. Event Description:

On December 29, 1983, the results of the Chimney Effluent Radionuclide Analysis, procedure number AAIS-CCP-0034, were found to be substantially less than normal. A walkdown of the sample lines revealed that the sample suction line was plugged somewhere between the sampling building and the isokinetic probe. Further investigation found that the heat trace of this line was not functioning. This would allow the moisture in the sample to condense and freeze to the pipe wall, eventually creating an ice plug.

At 11:30 a.m., the Chimney Gas Sample System was declared inoperable and at 2:05 p.m. a GSEP Unusual Event was declared. Unit One was in the RUN mode at an electrical load of 820 MW. Unit Two was in the REFUEL mode. Technical Specification 3.8.G.2 allows continued plant operation for 7 days provided that the Reactor(s) are operating at a steady state condition and/or shutdown, both SJAE monitors are operating to satisfy Specification 3.8.A.1 and the CAMs are operating to satisfy Specification 3.8.B.1. In addition, the radioactive effluent releases are to be less than 10% of Specification 3.8.A.2 and 3.8.B.2. The appropriate departments were immediately notified of these restrictions.

The sample line was subsequently thawed and the Chimney Gas Sample System was declared operational at 6:03 p.m. on December 30. The GSEP Unusual Event was terminated at that time.

VI. Probable Consequences of the Occurrence:

The probable consequences of the occurrence are minimal. Throughout the event, the Turbine Building Continuous Air Monitors and Off-Gas grab samples were used to determine chimney release rates. The Off-Gas radiation monitors were operational and capable of isolating the chimney and Off-Gas System if the need had arisen.

VII. Cause:

This event was caused by the failure of the power cable which fed the sample line heat tracing between the chimney and the sample building. Moisture in the gas sample condensed and froze to the inside wall of the sample line. Over a period of time, enough ice had built up to completely plug the line. The loss of sample flow caused an additional ice blockage where the sample line connects to the isokinetic probe. This two foot section of pipe is located outside the chimney wall, and the insulation around it had deteriorated. The root cause of the failed heat tracing can only be attributed to the extreme sub-zero temperatures recently experienced.

VIII. Corrective Action:

The immediate corrective action was to obtain Turbine Building air samples and Off-Gas samples to determine the chimney release rate. The heat trace power cable was replaced and the sample line from the chimney to the sample building was allowed to thaw. An air test indicated that a flow blockage still existed. The two foot exposed section of sample line was subsequently heat traced and re-insulated. The piping was thawed out and flow was established in the sample line.

This problem has occurred once before, in 1972, and the heat tracing was originally installed at that time. This action is deemed adequate to prevent further occurrences.

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DMB

NJK-84-32

January 25, 1984

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

Reference: Quad-Cities Nuclear Power Station
Docket Number 50-254, DPR-29, Unit One
Appendix A, Section 3.8.G.2

Enclosed please find Reportable Occurrence Number 83-48/03L-0 for Quad-Cities Nuclear Power Station.

This report is submitted to you in accordance with the requirements of Technical Specification 6.6.B.2.b; operation in a degraded mode permitted by a limiting condition for operation.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

N. J. Kalivianakis
Station Superintendent

NJK:DGC/bb

Enclosure

cc B. Rybak
A. Morrongiello
INPO Records Center

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JAN 30 1984