



Commonwealth Edison  
Dresden Nuclear Power Station  
R.R. #1  
Morris, Illinois 60450  
Telephone 815/942-2920

December 15, 1978

BBS Ltr. #78-1595

James G. Keppler, Regional Director  
Directorate of Regulatory Operations - Region III  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Reportable Occurrence "Update Report" 76-063/03X-2, Docket #050-237 is hereby submitted to your office to supplement Licensee Event Report 76-062/03X-1 concerning the failure of Units 2/3 Stack Gas Sampling Pump. It addresses the final corrective actions taken to prevent recurrence and eliminates the need for any valve or piping diagrams in the area. This event was reported to you under Dresden Nuclear Power Station Technical Specifications 6.6.B.2.(c), observed inadequacies in the implementation of administrative or procedural controls which threaten to cause reduction of degree of redundancy in reactor protection systems or engineered safety feature systems.

B.B. Stephenson  
Station Superintendent  
Dresden Nuclear Power Station

BBS/deb

REGULATORY DOCKET FILE COPY

Enclosure

cc: Director of Inspection & Enforcement  
Director of Management Information & Program Control  
File/NRC

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LICENSEE EVENT REPORT

DATE REPORT:

PREVIOUS REPORT DATE 3-3-77

CONTROL BLOCK: [ ] [ ] [ ] [ ] [ ] [ ] (1)

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

[0][1] [I][L][D][R][S][2] (2) [0][0][0][0][0][0][0][0] (3) [4][1][1][1][1] (4) (5)  
7 8 9 14 15 25 26 30 57-CAT-58  
 LICENSEE CODE LICENSE NUMBER LICENSE TYPE

CON'T  
 [0][1] REPORT SOURCE [L] (6) [0][5][0][0][0][2][3][7] (7) [1][0][0][3][7][6] (8) [1][2][1][5][7][8] (9)  
7 8 60 61 68 69 74 75 80  
 DOCKET NUMBER EVENT DATE REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

[0][2] During normal operation, Stack Gas Pump flow appeared low. Operator confirmed that  
 [0][3] "A" pump flow was 2.6 SCFM; "B" pump flow was 0.0 SCFM (flow greater than 2.9 SCFM  
 [0][4] is considered normal). Tech Spec requires continuous chimney monitoring, except  
 [0][5] during plateout tests.  
 [0][6]  
 [0][7]  
 [0][8]

[0][9] SYSTEM CODE [B][B] (11) CAUSE CODE [A] (12) CAUSE SUBCODE [B] (13) COMPONENT CODE [Z][Z][Z][Z][Z][Z] (14) COMP. SUBCODE [Z] (15) VALVE SUBCODE [Z] (16)  
7 8 9 10 11 12 13 18 19 20

(17) LER/RO REPORT NUMBER [ ] EVENT YEAR [7][6] SEQUENTIAL REPORT NO. [ ] OCCURRENCE CODE [0][3] REPORT TYPE [X] REVISION NO. [2]  
21 22 23 24 26 27 28 29 30 31 32

ACTION TAKEN: [G] (18) FUTURE ACTION [Z] (19) EFFECT ON PLANT [Z] (20) SHUTDOWN METHOD [Z] (21) HOURS [0][0][0][0] (22) ATTACHMENT SUBMITTED [Y] (23) NPRO-4 FORM SUB. [N] (24) PRIME COMP. SUPPLIER [Z] (25) COMPONENT MANUFACTURER [Z][9][9][9] (26)  
33 34 35 36 37 40 41 42 43 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

[1][0] Improper valve lineup and normal wear products from carbon impeller vanes on the  
 [1][1] sample lines, pump cavity and filter resulted in reduced efficiency and flow. To  
 [1][2] prevent recurrence DOP 1700-4 revised and complete system modification initiated and  
 [1][3] recently completed. Sys. Mod. eliminates any need for posting of valve or piping  
 [1][4] diagrams in area.

[1][5] FACILITY STATUS [E] (28) % POWER [0][9][7] (29) OTHER STATUS NA (30) METHOD OF DISCOVERY [A] (31) DISCOVERY DESCRIPTION Operational Event (32)  
7 8 9 10 12 13 44 45 46 80

[1][6] ACTIVITY RELEASED OF RELEASE [Z] (33) [Z] (34) AMOUNT OF ACTIVITY NA (35) LOCATION OF RELEASE NA (36)  
7 8 9 10 11 44 45 80

[1][7] PERSONNEL EXPOSURES NUMBER [0][0][0] (37) TYPE [Z] (38) DESCRIPTION NA (39)  
7 8 9 11 12 13 80

[1][8] PERSONNEL INJURIES NUMBER [0][0][0] (40) DESCRIPTION NA (41)  
7 8 9 11 12 80

[1][9] LOSS OF OR DAMAGE TO FACILITY TYPE [Z] (42) DESCRIPTION NA (43)  
7 8 9 11 12 80

[2][0] PUBLICITY ISSUED [N] (44) DESCRIPTION NA (45) **7812210195**  
7 8 9 10 68 69 80

NRC USE ONLY

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60 91 7-926

ATTACHMENT TO LICENSEE EVENT REPORT 78-063/03X-2  
COMMONWEALTH EDISON COMPANY (CWE)  
DRESDEN UNIT-2 (ILDRS-2)  
DOCKET #050-237

During normal operation, radiation protection personnel reported that stack gas sample pump flow appeared to be abnormally low. An operator confirmed that 2/3 "A" pump flow was 2.6 SCFM; 2/3 "B" pump flow was 0.0 SCFM (flow greater than 2.9 SCFM is considered normal). Tech Spec section 3.8.A.1 requires continuous chimney monitoring, but states that during plateau tests, when both pumps must be out of service, the steam jet air ejector monitors may be used to satisfy the plant chimney monitoring requirements if the reactor is operating at a steady-state power level. Although a plateau test was not being performed when both pumps were forced out of service, the reactor had been operating in the steady-state condition for 13 hours, and both steam jet air ejector monitors were operable. During the period from 1725 to 1930 hours, while the 2/3 "A" sample pump and suction filter were being replaced to provide rapid compliance with Tech Spec requirements, the steady-state operation of the unit and the static response of the SJAE monitors ensured that no unacceptable releases occurred. Because the cause of failure could not be readily identified on the 2/3 "B" sample pump, it was decided to first restore the operability of the "A" sample pump by simply replacing the pump and suction filter. Personnel errors resulting in stack gas sample pump problems have occurred occasionally in the past. (50-237/1976-63)

Normal wear products from the carbon impeller vanes collected in the sample lines, pump cavity, and filter of the 2/3 "A" pump, resulted in reduced pump efficiency and flow. The zero-flow condition on the 2/3 "B" pump was caused by an improper valve lineup.

As stated above, the 2/3 "A" sample pump and suction filter were replaced. The 2/3 "B" sample pump was returned to service at 1125 hours on 10/4/76, after the valving error was discovered.

Reevaluation of the events related to the temporary loss of stack gas sampling capability on October 3, 1976, has resulted in the following conclusions:

1. The proximate cause of the event was personnel error (cause code A). This conclusion is based on the fact that, at the time of the event, the operator was unable to establish flow in the standby sample train even though no equipment malfunction existed.
2. The root cause of the event was the inadequacy of the system description in the applicable operating procedure -- DOP 1700-4. Had a piping and valve diagram been included in the procedure, the operator would certainly have been able to readily perform the valving required to place the standby sample train in service.

To avoid recurrence, procedure DOP 1700-4, Off-Gas Vent (Stack) Radiation Monitoring System, was revised, and a valve and piping isometric drawing was added. In addition, a complete system modification recently completed has eliminated any need for a posted valve and piping diagram in the area.

1. The proximate cause of the event was personnel error (cause code A). This conclusion is based on the fact that, at the time of the event, the operator was unable to establish flow in the standby sample train even though no equipment malfunction existed.
2. The root cause of the event was the inadequacy of the system description in the applicable operating procedure -- DOP 1700-4. Had a piping and valve diagram been included in the procedure, the operator would certainly have been able to readily perform the valving required to place the standby sample train in service.

To avoid recurrence, procedure DOP 1700-4, Off-Gas Vent (Stack) Radiation Monitoring System, was revised, and a valve and piping isometric drawing was added. In addition, a complete system modification recently completed has eliminated any need for a posted valve and piping diagram in the area.