

LICENSEE EVENT REPORT

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

[0][1] N E F C S I [2][0][0] - [0][0][0][0][0] - [0][0] [3][4][1][1][1][1] [4] [] [] [5]
7 8 9 LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 57 CAT 58

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

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)
[0][2] During steady state operation at 100% power, it was discovered that the blowdown
[0][3] sampling line for steam generator (SG) "B" was isolated (HCV-2507A was closed).
[0][4] The isolation of HCV-2507A violated the Technical Specification requirement (Section
[0][5] 2.9.1(d)) for continuous monitoring of SG blowdown for radioactivity. Review of
[0][0] the auxiliary building operator log for SG "B" blowdown radiation monitor (RM-054B)
[0][7] indicated that there was no blowdown sample flow between 1600 on 5/20/82 and 0015
[0][8] on 5/21/82.

[0][9] SYSTEM CODE [M][C] (11) CAUSE CODE [A] (12) CAUSE SUBCODE [X] (13) COMPONENT CODE [V][A][L][V][E][X] (14) COMP. SUBCODE [E] (15) VALVE SUBCODE [N] (16)
7 8 9 10 11 12 13 18 19 20
[17] LER/RO REPORT NUMBER [8][2] (21) SEQUENTIAL REPORT NO. [0][1][1] (24) OCCURRENCE CODE [0][1] (28) REPORT TYPE [T] (30) REVISION NO. [0] (32)
ACTION TAKEN [E] (18) FUTURE ACTION [H] (19) EFFECT ON PLANT [Z] (20) SHUTDOWN METHOD [Z] (21) HOURS [0][0][0][0] (22) ATTACHMENT SUBMITTED [Y] (23) NPRD-4 FORM SUB. [N] (24) PRIME COMP. SUPPLIER [A] (25) COMPONENT MANUFACTURER [F][1][3][0] (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)
[1][0] The cause of the event was determined to be an inadvertent closing of HCV-2507A.
[1][1] Upon discovery, HCV-2507A was immediately reopened and returned to normal oper-
[1][2] ation at 0015 on 5/21/82. All operations and chemistry personnel involved with
[1][3] activities associated with the SG blowdown sampling system will be reinstructed
[1][4] on the sampling and release requirements of Technical Specification Section 2.9.1(d).
Further corrective actions are addressed in Attachment No. 2.

FACILITY STATUS [E] (28) % POWER [1][0][0] (29) OTHER STATUS [NA] (30) METHOD OF DISCOVERY [A] (31) DISCOVERY DESCRIPTION [Operator Observation] (32)
7 8 9 10 11 12 13 44 45 46 80

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

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

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

LOSS OF OR DAMAGE TO FACILITY TYPE [Z] (42) DESCRIPTION [NA] (43)
7 8 9 10 80

PUBLICITY ISSUED DESCRIPTION [N] (44) DESCRIPTION [NA] (45)
7 8 9 10 80

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NRC USE ONLY

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LER No. 82-011
Omaha Public Power District
Fort Calhoun Station Unit No. 1
Docket No. 05000285

Attachment No. 1

Safety Analysis

The Fort Calhoun Station steam generator (SG) blowdown system is designed to provide redundant isolation and/or radiation monitoring capabilities for safe and proper operation if a primary to secondary system tube leak were to occur. Steam generator blowdown system radiation monitors RM-054A and RM-054B (for SG's "A" and "B", respectively) are designed to monitor and isolate both SG blowdown lines if either RM-054A or RM-054B detect high radiation in the main blowdown lines. These radiation monitors are NaI scintillation detectors that alarm in the control room on the first setpoint, and alarm and isolate all blowdown lines at a second, higher setpoint. RM-054A isolates the SG blowdown system by means of valves HCV-1387A and HCV-1388A. Similarly, RM-054B isolates the SG blowdown system by means of valves HCV-1387B and HCV-1388B. Two other process radiation monitors, RM-057 and RM-056B, perform secondary system monitoring functions which alarm and thus alert the operator to isolate potential release paths to the environment. RM-057 monitors the condenser off-gas and will alarm and alert the operator to isolate the condenser off-gas from being released through a turbine building exhaust stack. RM-056B is an NaI scintillation detector which monitors the raw water discharge header into which the SG blowdown is discharged. RM-056B alarms in the control room on a pre-set high radiation level.

The SG blowdown "sample" lines each have isolation valves located in containment and in the auxiliary building sample room. These isolation valves are HCV-2506A/B and HCV-2507A/B for SG's "A" and "B", respectively. All four of these isolation valves can be manually controlled from the control room or from the sample room, and also have open/closed light indications in the control room. The design of the annunciation system for the blowdown sampling system is such that if no flow is detected in a blowdown sample line, an annunciator on auxiliary building panel AI-107 will illuminate "Steam Generator Blowdown Sample No Flow" and a horn will sound. Additionally, an annunciator in the control room will illuminate "Primary Sampling System Malfunction". Once the sample flow is reestablished, the control room annunciator will clear, but the visual indication on panel AI-107 can only be cleared by also resetting a local push button in the auxiliary building sample room which is adjacent to the visual flow indicators for the sample lines. These visual flow indicators are checked every two hours by the auxiliary building operator.

During the subject event, the following sequence of events occurred. At 1800 hours on May 20, 1982, during the routine check of the blowdown flow indication in the sample room, the auxiliary building operator noted that the "steam generator blowdown sample flow" indicator showed zero flow. He then called the control room operator, who verified the control room "Primary Sampling System Malfunction" alarm was not illuminated. Upon further investigation into the problem later, the SG

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Attachment No. 1
(Continued)

Safety Analysis (Continued)

"B" blowdown sample line inboard containment isolation valve HCV-2507A was found closed. HCV-2507A was immediately reopened and sample flow returned to normal through RM-054B. During investigation into this event, it was determined that the annunciator on panel AI-107 had illuminated but did not audibly sound, and the control room annunciator had not alarmed. The alarm logic was also tested and performed as designed, except that the horn on AI-107 did not sound. Corrective actions to investigate and prevent this annunciation problem from recurring are addressed in Attachment No. 2.

A safety concern did not exist during this event as radiation monitors RM-054A, 056B, and 057 were functioning properly and indicated normal instrument readings. These monitors are alarmed such that, had a tube leak occurred in either steam generator, the operator would have been alerted to the condition and would have isolated blowdown. Thus, the Fort Calhoun Station had adequate means to detect and isolate a primary to secondary system tube leak or rupture in one or both steam generators.

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Attachment No. 2

Corrective Action

All chemistry personnel involved in activities associated with the steam generator blowdown sampling system will be reinstructed on the sampling and release requirements of Technical Specification Section 2.9.1(d). As a further precautionary measure, a night order entry was immediately initiated on May 21, 1982 which required the Fort Calhoun Station operations staff to review the release and sampling requirements of Technical Specification Section 2.9.

An investigation to determine why the steam generator blowdown sample no flow annunciator on panel AI-107 did not sound is presently being conducted and the problem will be corrected. The investigation will include checking the wiring and circuitry associated with the SG blowdown sample lines and sample flow indication system for proper operation and logic. An Engineering Evaluation and Assistance Request (EEAR) will be initiated to investigate possibly providing for automatic closure of the blowdown system isolation valves (HCV-1387A/B and HCV-1388A/B) upon detecting a blowdown sample "no flow" condition.

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Attachment No. 3

Failure Data

This is the second occurrence at the Fort Calhoun Station regarding a failure to continuously monitor steam generator blowdown for radioactivity. The first occurrence was reported by Abnormal Occurrence Report 73-3.