Omaha Public Power District
444 South 16th Street Mall
Omaha, Nebraska 68102-2247
402/636-2000

March 2, 1992
LIC-92-056L

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Reference: Docket No. 50-285

Gentlemen:

Subject: Licensee Event Report 92-005 for the Fort Calhoun Station

Please find attacned Licensee Event Report 92-005 dated March 2, 1992. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(iv). If you should have any questions, please contact me.

Sincerely,

W. G. Gates

W. G. Gates
Division Manager
Nuclear Operations

WGG/dle

Attachment

c: R. D. Martin, NRC Regional Administrator
D. L. Wigginton, NRC Senior Project Manager
S. D. Bloom, NRC Project Engineer
R. P. Mullikin, NRC Senior Resident Inspector
INPO Records Center

IE22 1/1

NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Fort Calhoun Station Unit No. 1	0 5 0 0 0 2 8 5	1 OF 0 3

TITLE (4)
Main Steam Safety Valves Outside Setpoint Acceptance Criteria

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
0 2	0 1	9 2	9 2	0 0 4	0 0	0 3	0 2	9 2	N	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	3	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)					
POWER LEVEL (10)	0 0 0	20.402(b)		20.405(c)		50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	X	50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Craig E. Booth, Shift Technical Advisor	AREA CODE 4 0 2 5 3 3 - 6 8 7 4

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On February 1, 1992, Fort Calhoun Station (FCS) was in Mode 3, Hot Shutdown, and preparing to cool down for a scheduled refueling outage. While performing Surveillance Test IC-ST-MS-3002 for verification of Main Steam Safety Valve (MSSV) lift points, five of the ten MSSV's were found to be outside their respective acceptance criteria.

Omaha Public Power District has previously completed a safety analysis that indicates FCS would not exceed 110 percent of design pressure for the secondary and primary systems, if the MSSV's setpoints do not drift more than plus five percent. The root cause of this event is the overly restrictive operability criteria of plus or minus one percent currently specified in Technical Specification section 2.1.6(3).

The five valves that failed the test were recalibrated and satisfactorily tested. An application to amend the Technical Specifications was submitted to the NRC (LIC-91-181A, dated June 28, 1991 and LIC-91-314A, dated November 27, 1991) to change the tolerance range to plus three percent and minus two percent.

TEXT *If more space is required, use additional NRC Form 366A's(17)*

Overpressure protection at Fort Calhoun Station is ensured by means of Primary Safety Valves (PSV's), Main Steam Safety Valves (MSSV's), and the Reactor Protective System (RPS). These systems act to maintain the reactor coolant system and the steam generator secondary side pressures below 110 percent of their respective design values during a worst-case pressure transient.

Technical Specification (TS) 2.1.6(3) requires that whenever the reactor is in power operation, eight of the ten steam safety valves shall be operable, with their lift settings between 1000 pounds per square inch absolute (psia) and 1050 psia with a tolerance of plus or minus one percent of the nominal nameplate setpoint values. This TS requirement ensures that the relief capacity is sufficient to protect the steam generator from an overpressurization event resulting from a complete loss-of-load or loss of feedwater flow without a reactor trip.

On February 1, 1992, Fort Calhoun Station was in Mode 2, Hot Shutdown, and preparing to cool down for a scheduled refueling outage. While performing Surveillance Test IC-ST-MS-3002, for verification of MSSV lift points, five of the ten MSSV's were found to be outside their respective acceptance criteria.

Three of the five MSSV's that failed to meet the test criteria were MS-276, MS-291 and MS-278 on Steam Generator "A". The other two valves were MS-280 and MS-292 on Steam Generator "B". Valves MS-291 and MS-292 are two and one-half inch relief valves, the remaining three are six inch reliefs. All the valves are manufactured by Dresser Industries.

The setpoints, actual lift pressures, and the variation percentage were measured in pounds per square inch gauge (psig). Direct comparison to lift settings specified in TS 2.1.6(3) requires conversion from psig to psia.

VALVE	SETPOINT	ACTUAL LIFT POINT	VARIATION PERCENT
MS-276	1025 psig	1048 psig	2.2
MS-278	1000 psig	1022.7 psig	2.3
MS-291	985 psig	1008.7 psig	2.4
MS-280	1025 psig	1052.1 psig	2.6
MS-292	985 psig	1017 psig	3.2

Each valve that was discovered out of tolerance during the performance of this test was recalibrated and tested until it passed two consecutive tests with no adjustment between tests.

The direct cause of this event is safety valve setpoint drift. Drift is not considered to be an abnormality for this type of valve. The root cause of this event was determined to be overly restrictive operability criteria for the MSSV's.

TEXT (If more space is required, use additional NRC Form 366A's)(17)

Omaha Public Power District (OPPD) has analyzed the loss of load and loss of feedwater design basis events to support its application for an amendment to the Facility Operating License (LIC-91-181A, dated June 28, 1991 and LIC-91-314A, dated November 27, 1991). This application proposes to change the maximum drift acceptance criteria for the MSSV's from plus or minus one percent to plus three percent/minus two percent. The results of the analysis indicate that as long as the setpoints do not drift more than plus five percent, the primary and secondary systems will stay within 110 percent of their design pressure. This would be valid regardless of the primary safety valve setpoint. The event is bounded by this analysis and the margin of safety was not reduced below that required in the USAR.

The failure of the MSSV's to meet the TS requirements was reported to the NRC pursuant to 10 CFR 50.72(b)(2)(i) on February 1, 1992. While five valves were outside their operability criteria, the plant was not at power operation when the determination of inoperability was made, therefore; the requirements of TS 2.1.6.(3) do not apply. However, it can be assumed that the MSSV's setpoints had drifted outside their setpoints during power operation, so this event was determined to be reportable pursuant to 10 CFR 50.73(a)(2)(ii).

The safety function of the MSSV's was not significantly impaired by the setpoint drift. It should be noted that had the proposed TS amendment been in place at the time of the testing, nine of the ten valves would have passed the test. The failure of one valve to meet the acceptance criteria would not have exceeded the requirements of TS 2.1.6(3) which allows two MSSV's to be inoperable.

The following corrective actions address this event:

- the five valves that failed the test were recalibrated and satisfactorily tested,
- an application to amend the Technical Specification has been submitted to the NRC, as described above, to revise the operability criteria for the MSSV's.

This is the ninth reportable event due to MSSV's failing to meet operability requirements as provided in TS 2.1.6(3). The previous LERs are 90-004, 88-023, 87-003, 85-006, 84-002, 82-020, 77-024 and 76-019.