NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

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)
VIAS Actuation

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 9	0 2	8 4	8 4	0 1 9	0 0	1 0	0 2	8 4	N	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	X 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)	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
Lawrence T. Kusek, Supervisor-Operations Fort Calhoun Station, Unit No. 1	AREA CODE 4 0 2 — 4 2 6 - 4 0 1 1

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)

During normal plant operation at 100% power with a containment pressure reduction in progress, an unplanned actuation of the Ventilation Isolation Actuation System (VIAS) occurred at 0442 on September 2, 1984. The actuation of the VIAS signal [an Engineered Safety Feature (ESF)] was not initiated to mitigate an event as described in the USAR. The actuation was caused by operator error. The actuation occurred while the operator was changing the ventilation discharge duct monitor, RM-061, to the high Alert/Alarm setpoints during a confirmed temperature inversion. The operator depressed the green "Reset" pushbutton light for RM-062 instead of RM-061. Both monitors have the same panel face and the selector switches for high and low setpoints for RM-061 are on the same level as RM-062. When the low/high setpoint switch was re-positioned from the low setpoint to the high setpoint, RM-061 momentarily went into high alarm and initiated VIAS.

As soon as the VIAS actuation occurred, the monitors were returned to normal, VIAS was reset, and the containment pressure reduction was restarted. All Engineered Safeguards Features involved in this incident functioned as designed. No equipment malfunctions occurred and no radioactive release occurred.

To prevent future unplanned VIAS actuations of this nature, applicable plant procedures will be reviewed and changed if necessary. The plant will also investigate the feasibility of placing RM-061's high/low setpoint selector switch directly on the face of the panel. This incident has been discussed with the involved individual and he was given the lead in preparing this report, reviewing the applicable plant procedures, and making any appropriate changes. If any changes are made, appropriate training will be given to the Operations Department.

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

During normal plant operation at 100% power with a containment pressure reduction in progress, an unplanned actuation of the Ventilation Isolation Actuation System (VIAS) occurred at 0442 on September 2, 1984. The actuation of the VIAS signal [an Engineered Safety Feature (ESF)] was caused by operator error. The actuation occurred while the operator was changing the ventilation discharge duct monitor, RM-061, to the high Alert/Alarm setpoints during a confirmed temperature inversion. The operator depressed the green "Reset" pushbutton light for RM-062 instead of RM-061. Both monitors have the same panel face and the selector switches for high and low setpoints for RM-061 are on the same horizontal plane as RM-062. When the low/high setpoint switch was re-positioned from the low setpoint to the high setpoint, RM-061 momentarily went into high alarm and initiated VIAS. If the green "Reset" pushbutton for RM-061 had been depressed instead of the one for RM-062, the VIAS actuation would not have occurred.

Temperature inversions are a fairly common occurrence at the Fort Calhoun Station. They are evidenced by a positive ΔT indication from the weather tower temperature instruments, generally elevated readings on plant area and process monitors, and abnormally high concentrations of short-lived Radon daughters in and around the plant buildings. Once an inversion has been confirmed by lab analysis of grab air samples, the Alert/
Alarm setpoints for RM-061 are switched from the low range to the high range to keep RM-061 out of alarm. When this high/low setpoint switch is re-positioned, the meter on RM-061 spikes high, usually above the alarm setpoint. To prevent RM-061 from going into alarm and initiating VIAS during this evolution, it is normal practice to depress the green "Reset" pushbutton on the face of the monitor in the control room to momentarily bypass the trip function when the high/low setpoints are switched. The operator performing this evolution on September 2 depressed the "Reset" pushbutton on RM-062 instead of RM-061; thus, when he re-positioned the high/low setpoint and RM-061 spiked high, its trip function was not bypassed, the monitor tripped, and VIAS was initiated. The error was precipitated by the fact that RM-061 and RM-062 have nearly identical panel faces. In addition, the high/low selector switch for RM-061 is located on the same horizontal plane as the RM-062 panel face.

VIAS, as described in the USAR, is designed to mitigate a release of significant radioiodine or radiogas from the containment to atmosphere from such sources as reactor coolant leaks. VIAS is initiated by a safety injection actuation signal (SIAS) or a containment spray actuation signal (CSAS) or a containment radiation high signal (CRHS). The CRHS feature employs five radiation monitors taking samples from the containment and/or ventilation stack. These monitors supply a 1-out-of-5 logic network to trip the VIAS lockout relays.

The five ventilation radiation monitors that actuate VIAS are used for an isolation function similar to that performed by other process radiation monitor systems. The ventilation monitors are used as process monitors in order to satisfy the Technical Specification 2.9 objective of controlling the release of radioactive effluents to the environs to as low as practicable.

The VIAS performs the following functions:

1. Closes the containment purge valves.
2. Closes the containment pressure relief valves.
3. Stops the containment purge fans.
4. Closes the containment air sampling valves.

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

5. Opens the inlet and outlet vents to the safety injection pump rooms and the spent regenerant tank room.
6. Starts both control room air conditioning units and places this system in a filtered air makeup mode.
7. Closes the waste gas header release valve to the stack.

The actuation of the VIAS signal in this case was not initiated to mitigate an event as described in the USAR. The incident was caused by operator error. As soon as the VIAS actuation occurred, the monitors were returned to normal, VIAS was reset, and the containment pressure reduction was restarted. All Engineered Safety Features involved in this incident functioned as designed. No equipment malfunctions occurred and no radioactive release occurred.

To prevent future unplanned VIAS actuations of this nature, applicable plant procedures will be reviewed and changed if necessary. The plant will also investigate the feasibility of placing RM-061's high/low setpoint selector switch directly on the face of the panel. The incident has been discussed with the involved individual and he was given the lead in preparing this report, reviewing the applicable plant procedures, and making any appropriate changes. If any changes are made, appropriate training will be given to the Operations Department.

Other VIAS actuations that have occurred since the new LER rule went into effect on January 1, 1984, were reported in LER 84-005, LER 84-007, LER 84-006, LER 84-014, LER 84-017 and LER 84-018.

Omaha Public Power District
1623 Harney Omaha, Nebraska 68102
402/536-4000

October 2, 1984
FC-754-84
LIC-84-324

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Reference: Docket No. 50-285

Gentlemen:

Licensee Event Report for the
Fort Calhoun Station

Please find attached Licensee Event Report 84-019 dated October 2, 1984. This report is being submitted per requirements of 10 CFR 50.73.

Sincerely,

R. L. Andrews
Division Manager
Nuclear Production

RLA/DJM/rh-W

Attachment

cc: Mr. Dorwin R. Hunter, Chief
Reactor Project Branch 2
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

INPO Records Center
Mr. E. G. Tourigny, Project Manager

SARC Chairman
PRC Chairman
Mr. L. A. Yandell, Senior Resident Inspector
Fort Calhoun File (2)

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