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 7	0 3	8 4	8 4	0 1 4	0 0	0 8	0 2	8 4	N	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	5	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)	20.406(c)	X 50.73(a)(2)(iv)	73.71(b)
		20.406(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.406(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.406(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.406(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	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)

An unplanned actuation of the Ventilation Isolation Actuation System (VIAS) occurred at 1100 on July 3, 1984, during the routine weekly replacement of an iodine-collection cartridge on RM-060, the ventilation discharge duct iodine monitor. After completion of the filter replacement, VIAS was reset and no further alarms occurred. No equipment malfunctions were noted.

The iodine-collection cartridge showed no iodine accumulation, all gaseous contamination concentrations were less than the minimum detectable activities.

To prevent future unplanned VIAS actuations, an operations memorandum has been written requiring RM-060 be taken out of service during filter replacement.

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

The ventilation discharge duct gaseous iodine monitor, RM-060, alarmed on July 3, 1984, at 1100 during routine weekly replacement of the RM-060 collection filter. The alarm initiated a VIAS trip, considered part of the engineered safety feature (ESF) system.

At the time of the incident, Fort Calhoun Station Unit No. 1 was in Mode 5 (Refueling Shutdown) at 195 °F., 215 psia in the reactor coolant system. The only gaseous radioactive release in progress was normal low level Auxiliary Building ventilation. RM-060, the stack monitor for measurement of I-131, was operating properly and indicating a level of I-131 below the alert setpoint. RM-060 is a cumulative monitor utilizing a charcoal cartridge and fiber prefilter. The detector is NaI (Tl) with a narrow detection window centered around 361 KeV. Shortly before 1100 hours, a chemistry technician contacted a control room operator and informed him that the weekly changeout of the RM-060 cartridge and prefilter was about to begin. Normally, the control room operator turns the RM-060 control knob to the "CAL" position disabling the monitor and its VIAS function during the changeout. The operator did not remember that this was expected. The technician removed the lead shield from the cartridge housing in order to remove the cartridge. This exposed the detector to background radiation of about one mR/hr. The detector alarm setpoint is 315 cpm above normal shielded background. Room background caused the detector to respond as designed and rise to a value above the alarm setpoint such that at 1100, VIAS was actuated.

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 also 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.
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.

Laboratory counting of the filter being removed at the time of the VIAS actuation showed concentrations of less than the minimum detectable activities for all gaseous radioisotopes tested.

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The actuation of the VIAS signal in this case was not initiated to mitigate an event, as described in the USAR. The actuation occurred while the plant was in a refueling shutdown condition and during the replacement of the filter as per Chemistry Manual Procedure, CMP-4.38. The alarm cleared and VIAS was reset with no further actuations following completion of the filter replacement and returning the monitor to service. All plant systems involved in this incident operated within their design basis with no equipment damage or failure.

To prevent future unplanned VIAS actuations, an operations memorandum has been written requiring RM-060 be taken out of service during filter replacement.

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 and LER 84-006.

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

August 2, 1984
FC-379-84
LIC-84-244

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 84-014 dated August 2, 1984. This report is being submitted per requirements of 10 CFR 50.73.

Sincerely,

R. L. Andrews
Division Manager
Nuclear Production

RLA/DJM:jmm

Attachment

cc: Mr. Richard P. Denise, Director
Division of Resident, Reactor Project
& Engineering Programs
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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