



**ENTERGY**

Entergy Operations, Inc.

1448 S.R. 333

Russellville, AR 72801

Tel 501 858-5000

November 14, 1995

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

Subject: Arkansas Nuclear One - Unit 2  
Docket No. 50-368  
License No. NPF-6  
Licensee Event Report 50-368/95-006-00

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(B), enclosed is the subject report concerning an unmonitored gaseous effluent release.

Very truly yours,

Dwight C. Mims  
Director, Nuclear Safety

DCM/tfs

enclosure

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9511200126 951114  
PDR ADDCK 05000368  
S PDR

cc: Mr. Leonard J. Callan  
Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-8064

Institute of Nuclear Power Operations  
700 Galleria Parkway  
Atlanta, GA 30339-5957

**LICENSEE EVENT REPORT (LER)**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Arkansas Nuclear One - Unit 2	DOCKET NUMBER (2) 05000368	PAGE (3) 1 OF 4
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TITLE (4) RADWASTE AREA GASEOUS EFFLUENT FLOWPATH NOT CONTINUOUSLY MONITORED AS REQUIRED BY TECHNICAL SPECIFICATIONS DUE TO A SEPARATED SAMPLE LINE CONNECTION CAUSED BY AN AUXILIARY SAMPLING EQUIPMENT TUBING CONNECTION HAVING INADEQUATE STABILITY

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 NAME	DOCKET NUMBER
10	18	95	95	006	00	11	14	95	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (Check one or more) (11)									
POWER LEVEL (10)	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						
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	Specify in Abstract Below and in Text					
		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 Thomas F. Scott, Nuclear Safety and Licensing Specialist	TELEPHONE NUMBER (Include Area Code) 501-858-4623
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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
B	IL	TBG	X999	N					

SUPPLEMENTAL REPORT EXPECTED (14)

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

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

As required by Technical Specifications, auxiliary sampling equipment was being used to monitor radioactive gaseous effluent from the ANO-2 Rad Waste Area ventilation of the Auxiliary Building while maintenance was in progress on the normal instrumentation. Following the maintenance, tubing for the auxiliary sampling equipment was discovered to have become disconnected so that the ventilation pathway could have been unmonitored for no more than two hours and eight minutes. Attempts to identify an individual working in the area at that time who may have inadvertently come into contact with the tubing were unsuccessful. The root cause of this condition was attributed to inadequate auxiliary sampling equipment tubing connection stability that made it susceptible to failures of this nature. Failure to provide continuous monitoring of this ventilation pathway constituted operation prohibited by Technical Specifications. A review of logs and records indicated that no significant amounts of radioactive material were released during the period when the pathway was potentially unmonitored. Corrective actions include new procedure requirements for strengthening connectors and using caution flagging to prevent inadvertent contact while the equipment is in use. The auxiliary sampling equipment will be modified to minimize the possibility of similar occurrences.

**LICENSEE EVENT REPORT (LER)**  
**TEXT CONTINUATION**

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TEXT (if more space is required, use additional copies of NRC Form 366A) (17)

**A. Plant Status**

At the time of this event, Arkansas Nuclear One Unit 2 (ANO-2) was in cold shutdown (Mode 5) conditions with Reactor Coolant System (RCS) [AB] temperature 85F and vented to atmosphere. A refueling outage was in progress.

**B. Event Description**

At approximately 1720 on October 18, 1995, ANO Chemistry personnel discovered that continuous monitoring of the Rad Waste Area ventilation gaseous effluent was not being conducted as required by the Technical Specifications (TS).

Technical Specification 3.3.3.9 requires that the radioactive gaseous effluent monitoring instrumentation shown in Table 3.3-12 be operable during releases via the pathway to ensure that dose rates in unrestricted areas will be within specified limits. Among the actions required by Table 3.3-12 for conditions with inoperable instrumentation is continuous collection of samples by auxiliary sampling equipment. At ANO, the auxiliary sampling equipment consists of a sample pump, flow meter, iodine and particulate filter cartridge. It is configured with tygon tubing connections between the sample pump, the filter cartridge, and the normal sample path connection point.

In order to perform maintenance on the instrumentation monitoring gaseous effluent from the Rad Waste Area of the ANO-2 Auxiliary Building [NF], an auxiliary sample pump was connected to monitor that pathway at approximately 1112 on October 18, 1995. Chemistry personnel positioned the filter cartridge so that its weight was supported. They also verified that each connection point was secure and that there was no stress on any of the lines before starting the sample pump. At 1512, Chemistry personnel verified that the sample tubing and filter cartridge were in place and properly connected. When they returned at 1720 to remove the auxiliary sample pump, the tubing was found to be disconnected from the cartridge inlet. This condition resulted in the pump taking its sample from the room instead of the release path, as required. This condition was corrected upon discovery. The normal instrumentation was restored to an operable status at 1808 on October 18, 1995.

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

### C. Root Cause

The Chemists who connected the auxiliary sampling equipment believed that they had complied with procedural requirements to verify that all connections were tight by physical handling and visual inspection. Based on their experience with previous installations, they felt sure that the connections would not come apart. After the condition was discovered, Chemists reattached the tubing to the cartridge and checked integrity of the connection by twirling the cartridge to see if it would come loose at the same point. It did not. This indicated that some force had been required to break that connection. Personnel who were known to be working in the area most of the day were interviewed. They stated that they had not come in contact with the alternate sampling equipment at any time. An attempt to identify other personnel who may have been in the area at the time the tubing became disconnected was unsuccessful. While it is likely that the connection was broken by someone who inadvertently came in contact with it, the root cause for this condition is attributed to inadequate auxiliary sampling equipment tubing connection stability that made the connections susceptible to failures of this nature.

### D. Corrective Actions

Chemists were instructed to reinforce all connections on the auxiliary sampling equipment with hose clamps or tie wraps.

Procedures for using the sampling equipment were revised to provide additional details of securing the connections and to place caution flagging around the equipment to minimize the possibility of inadvertent contact while it is being used.

The auxiliary sampling equipment will be reviewed for potential enhancements to minimize the possibility of similar future occurrences. These enhancements are expected to be incorporated by March 15, 1996.

### E. Safety Significance

A review of various logs and records indicates that there were no significant releases of radioactive material via the Rad Waste Area ventilation pathway during the time that it was unmonitored. Since the activity released was determined to have been negligible, this condition resulted in no impact on the environment or dose to the general public. Therefore, this event is judged to have had no actual safety significance.

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**F. Basis for Reportability**

Technical Specifications require that a radioactive gaseous effluent flowpath be continuously monitored any time a release is in progress via that pathway. Since the Rad Waste Area ventilation effluent was unmonitored for some period of time (less than 2 hours and 8 minutes) while the ventilation system was in use, this condition is reportable in accordance with 10CFR50.73(a)(2)(i)(B) as an operation prohibited by Technical Specifications.

**G. Additional Information**

Licensee Event Report (LER) 50-313/93-007-00 reported an event involving a sample tubing being found disconnected from the filter cartridge of the auxiliary sampling equipment monitoring a release from the ANO-1 Rad Waste Area ventilation pathway. The root cause was attributed to inadequate procedural guidance concerning support of the filter cartridge to prevent its weight from causing stress on the tubing and connections. The corrective action was to provide guidance by a procedure revision and training. For the event on October 18, 1995, Chemistry personnel complied with the procedure requirements to secure the equipment with minimum stress on the connections, but these actions did not prevent the condition from reoccurring because a connection failure resulting from inadvertent contact with the equipment was not addressed by the corrective action plan.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].