



Entergy Operations, Inc.  
1448 S.R. 333  
Russellville, AR 72301  
Tel 501 858-5000

March 6, 1996

1CAN039601

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

Subject: Arkansas Nuclear One - Unit 1  
Docket No. 50-313  
License No. DPR-51  
Licensee Event Report 50-313/96-001-00

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(B), enclosed is the subject report concerning reactor building purge filtration system surveillance testing.

Very truly yours,

A handwritten signature in cursive script that reads "Dwight C. Mims".

Dwight C. Mims  
Director, Nuclear Safety

DCM/rhs

enclosure

110128

9603120240 960306  
PDR ADDCK 05000313  
S PDR

JE221

U. S. NRC  
March 6, 1996  
1CAN039601 Page 2

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 1

DOCKET NUMBER (2)

05000313

PAGE (3)

1 OF 4

TITLE (4) Reactor Building Purge Filtration System Charcoal Filter Analysis Not Completed Prior To Initial Irradiated Fuel Movement As A Result Of A Misinterpretation Of Technical Specifications Surveillance Requirements

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
02	07	96	96	001	00	03	06	96	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (Check one or more) (11)							
POWER LEVEL (10)		100	20.402(b)		20.405(c)		50.73(a)(2)(iv)		70.71(b)	
			20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		70.71(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	
			20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		Abstract Below	
			20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		and in Text	

## LICENSEE CONTACT FOR THIS LER (12)

NAME

Richard H. Scheide, Nuclear Safety and Licensing Specialist

TELEPHONE NUMBER (Include Area Code)

501-858-5000

## 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)

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

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

On February 13, 1996, it was identified by ANO personnel that the literal requirements of Technical Specifications regarding testing of the Reactor Building Purge Filtration System had not been met during a refueling outage in 1993. Specifically, the specifications require that all required tests and the charcoal analysis be complete prior to initial irradiated fuel movement. During the outage, all tests were completed and a charcoal sample was taken prior to fuel movement, but fuel movement was initiated before the sample was analyzed. The analysis was done after fuel movement was completed and indicated that filter efficiency was 89.8 percent, less than the 90 percent required by Technical Specifications. This condition was determined to be acceptable based on an interpretation that the intent of the specification was met considering guidance contained in Generic Letter 83-13 which states that laboratory analysis for charcoal efficiency must be complete within 31 days after removal. The cause of this event was determined to be a misinterpretation of the requirements that must be met to achieve compliance with Technical Specifications. Pending the implementation of Improved Standard Technical Specifications, which are scheduled to be submitted to the NRC in the third quarter, 1996, appropriate procedures were revised to require charcoal sample analysis to be complete prior to the initial movement of irradiated fuel.

NRC FORM 366A (5-92)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95	
<b>LICENSEE EVENT REPORT (LER)</b> TEXT CONTINUATION				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)		DOCKET NUMBER (2)		LER NUMBER (6)	
Arkansas Nuclear One - Unit 1		005000313		YEAR	SEQUENTIAL NUMBER
				96	001
				REVISION NUMBER	PAGE (3)
				00	2 OF 4

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

A. Plant Status

At the time this condition was identified, Arkansas Nuclear One, Unit-1 (ANO-1) was operating at approximately 100 percent power. Reactor Coolant System (RCS)[AB] temperature was 579 degrees and RCS pressure was 2155 psig.

B. Event Description

On February 13, 1996, it was identified by ANO personnel that the Technical Specifications requirements for the Reactor Building Purge Filtration System [VA] were not satisfied during Refueling Outage 1R11 in 1993.

Technical Specification 4.25.3 a stipulates that the "tests and sample analysis of Specification 3.22.1 a, b, & c. shall be performed within 720 system operating hours prior to initial irradiated fuel handling operations in the reactor building..." Technical Specification 3.22.1 requires that the Reactor Building Purge Filtration System be operable whenever irradiated fuel handling operations are in progress in the reactor building and shall have the following performance capabilities:

- a. The results of in-place cold DOP and halogenated hydrocarbon tests at design flows (+/- 10 percent) on HEPA filters and charcoal adsorber banks shall show  $\geq$  99 percent DOP removal and  $\geq$  99 percent halogenated hydrocarbon removal.
- b. The results of laboratory carbon sample analysis shall show  $\geq$  90 percent radioactive methyl iodide removal at a velocity within +/- 20 percent of system design.
- c. Fans shall be shown to operate within +/- 10 percent design flow.

On February 7, 1996, a Condition Report (CR) was written documenting that there were no procedural controls to ensure that the literal requirements of Technical Specification 4.25.3.a are adhered to. A review of past refueling outage documentation was initiated to determine if the specification had been violated. On February 13, it was identified that fuel movement began during 1R11 before the charcoal sample was analyzed, contrary to the requirements of specification 4.25.3 a.

On September 14, 1993, during 1R11, a charcoal sample was taken and the requirements of specifications 3.22.1 a and c were met prior to initial fuel movement. Fuel movement began on September 25 and was completed on September 29. The results of the charcoal analysis were received on September 30, indicating that charcoal efficiency was 89.8 percent. A CR was initiated documenting the unsatisfactory test results. The condition was dispositioned as acceptable based on an interpretation that the intent of the

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

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)		DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Arkansas Nuclear One - Unit 1		005000313	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 4
			96	001	00	

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

specification was met considering guidance contained in NRC Generic Letter 83-13 (Clarification of Surveillance Requirements for HEPA Filters and Charcoal Adsorber Units in Standard Technical Specifications on ESF Cleanup Systems). This guidance states that the laboratory analysis for charcoal efficiency must be completed within 31 days after removal, thus documenting the acceptability of beginning fuel movement prior to the completion of sample analysis.

By adhering to the testing requirements discussed in Generic Letter 83-13, ANO did not meet the literal wording of Technical Specification 4.25.3.a. However, it should be noted that in adopting these requirements, testing in excess of that required by the specification was also implemented. The Technical Specification requires only that the filters be tested prior to initial fuel movement. ANO's filter testing program requires that the filters be tested after every 720 operating hours if fuel movement is in progress.

**C. Root Cause**

In 1992, ANO-1 Technical Specifications surveillance requirements regarding charcoal filter testing were evaluated against Generic Letter 83-13 to determine if an amendment should be processed to clarify the Technical Specifications. It was concluded at that time that, although the Technical Specifications were unclear, an amendment was not necessary because the generic letter adequately clarified the intent of the specifications. It was believed that meeting the intent of the specification constituted compliance; therefore, neither a Technical Specifications amendment nor a formal interpretation of the specifications was pursued at that time.

The root cause of this condition was attributed to a misinterpretation of the requirements which must be met to achieve compliance with Technical Specifications.

**D. Corrective Actions**

As an interim corrective action, appropriate procedure changes were made to ensure that charcoal sample analysis results are received before initial irradiated fuel movement begins. These changes were completed on February 27, 1996.

Permanent corrective actions will be implemented when ANO adopts the Improved Standard Technical Specifications, which are currently scheduled for submittal to the NRC for review in the third quarter of 1996. The improved specifications require that the filtration systems be tested in accordance with the Ventilation Filter Testing Program, which is reflective of the guidance contained in Generic Letter 83-13.



NRC FORM 366A (5-92)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95	
<b>LICENSEE EVENT REPORT (LER)</b> TEXT CONTINUATION				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 (MNBB 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)		DOCKET NUMBER (2)		LER NUMBER (6)	
Arkansas Nuclear One - Unit 1		005000313		YEAR	SEQUENTIAL NUMBER
				96	001
				REVISION NUMBER	PAGE (3)
				00	4 OF 4

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

#### E. Safety Significance

The ANO-1 Safety Analysis assumes a 90 percent filter efficiency in evaluating the fuel handling accident with a resultant dose to the thyroid at the exclusion distance of .920 rem. The "as found" filter efficiency of 89.8 percent would have resulted in a negligible impact on the offsite dose had a fuel handling accident occurred during the time that the charcoal was degraded. Therefore, this condition is considered to be of minimal safety significance.

#### F. Basis for Reportability

The literal wording of Technical Specifications was not met in 1R11 when initial irradiated fuel movement commenced prior to the completion of charcoal sample analysis. In addition, filter analysis determined that the charcoal did not meet the operability requirements of Technical Specification 3.22.1 while fuel movement was in progress. Therefore, this condition is reportable in accordance with 10CFR50.73(a)(2)(i)(B) as operation prohibited by the plant's Technical Specifications.

#### G. Additional Information

Records were checked back as far as 1990 (1R9) and no other instances of conditions similar to the one described in this report were identified. However, LER 1-90-015 reported a condition involving the Fuel Handling Area Ventilation System in which fuel handling was commenced with greater than the Technical Specifications allowed operating hours on the ventilation system since its last surveillance

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