



Entergy Operations, Inc.  
1448 S.R. 333  
Russellville, AR 72802  
Tel 501 858 5000

2CAN010204

January 15, 2002

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Mail Station OP1-17  
Washington, DC 20555

Subject: Arkansas Nuclear One - Unit 2  
Docket No. 50-368  
License No. NPF-6  
Failed Fuel Percentage for Shaft Seizure Accident and Corrections to  
Environmental Information Regarding ANO-2 Power Uprate

Dear Sir or Madam:


Entergy Operations, Inc. submitted an "Application for License Amendment to Increase Authorized Power Level," on December 19, 2000 (2CAN120001). Additional information was provided to the NRC in letters dated October 31, 2001 (2CAN100102), and December 10, 2001 (2CAN120107). On December 4, 2001, the NRC telexed a follow-up request for additional information regarding the October 31, 2001, letter. The NRC asked for confirmation that the total fuel failures for the reactor coolant pump shaft seizure accident would be less than 14%. The NRC question and ANO response are provided in Attachment 1.

The December 10, 2001, letter contains supplemental information regarding the environmental impact of the ANO-2 power uprate. During the NRC review of the letter, errors were identified. The errors and recommended corrections were discussed with the NRC project manager during a telephone conversation on January 2, 2002. Attachment 2 contains corrections to the December 10, 2001, letter.

This letter contains one regulatory commitment related to the failed fuel value for the reactor coolant pump shaft seizure accident. Consistent with the NRC's request, the failed fuel value will be maintained in the Safety Analysis Report for the duration of Cycle 16. The regulatory commitment is included in the table in Attachment 3.

I declare under penalty of perjury that the foregoing is true and correct. Executed on January 15, 2002.

Sincerely,

A handwritten signature in cursive script, appearing to read "Glenn R. Ashley".

Glenn R. Ashley  
Manager, Licensing

GRA/dwb  
Attachments

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

NRC Senior Resident Inspector  
Arkansas Nuclear One  
P.O. Box 310  
London, AR 72847

Mr. Thomas W. Alexion  
NRR Project Manager Region IV/ANO-2  
U. S. Nuclear Regulatory Commission  
NRR Mail Stop 04-D-03  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

**Attachment 1**

**Follow-up Request for Additional Information  
Received on December 4, 2001 Regarding the October 31, 2001, Submittal**

NRC Question

In your October 31, 2001, response to Question 8 regarding the reactor coolant pump shaft seizure accident, you indicated that although the Cycle 16 reload efforts are not complete at this time, it will be verified that the total fuel failures will be less than 14%. Please commit to confirming, in writing and prior to the start of Cycle 16, that the actual fuel damage prediction is less than 14%, and also commit to maintaining the less than 14% value in the SAR for Cycle 16.

ANO Response

Cycle 16 reload efforts regarding the reactor coolant pump (RCP) shaft seizure accident have been completed. Consistent with the ANO-2 licensing basis, the total fuel failures for the RCP shaft seizure accident will be  $\leq 14\%$ . The maximum failed fuel percentage has been calculated to be 4.95%.

Consistent with the NRC's request, the  $\leq 14\%$  value will be maintained in the Safety Analysis Report for the duration of Cycle 16.

## **Attachment 2**

### **Corrections to Letter Dated December 10, 2001**

During a telephone call with the NRC Project Manager on January 2, 2002, errors and recommended corrections were discussed concerning the attachment to Entergy's letter to the NRC dated December 10, 2001, "Supplemental Information Regarding the Environmental Impact of ANO-2 Power Uprate." The errors and corrections to the letter are described below:

#### Page 2, Section 2.0, paragraph 2, second sentence

The September 22, 2000, date in the second sentence is incorrect. The second sentence should be changed to read, "On January 31, 2000 (1CAN010003), Entergy submitted a supplement to its environmental report supporting the license renewal of ANO-1. Responses to NRC requests for additional information regarding the environmental report for license renewal were submitted on June 26 (1CAN060002), July 31 (1CAN070003) and September 21, 2000 (1CAN090005)."

#### Page 2, Section 2.0, paragraph 2, third sentence

The NUREG number in the third sentence is incorrect. NUREG-1474 should be NUREG-1437.

#### Page 2, Table 1, last item

The NUREG number is incorrect. NUREG-1474 should be NUREG-1437.

#### Page 3, Section 3.1, paragraph 2, first sentence

Although "ER" is spelled out in Table 1, no specific reference was provided in the Table. Therefore, the first sentence should be changed to read "Noise was not addressed in the Arkansas Nuclear One Unit 2, Environmental Report (ER) submitted on March 1, 1974 and amended on July 11 and December 13, 1974, June 13, October 6 and December 19, 1975, June 21 and September 8, 1976, or FES."

#### Page 4, Section 3.2.2, paragraph 3, first sentence

The text should be changed to clarify that withdrawal, as defined in the contract with the Corps of Engineers, means consumption by way of evaporation. The sentence should be changed to read, "The limits on withdrawal (i.e., consumption via evaporation) from Lake Dardanelle are based on economics."

#### Page 5, Section 3.3.1, paragraph 3, first sentence

The 840 gpm value stated as the increase in circulating water makeup rate is conservative. Add the following sentence to the end of the third paragraph in section 3.3.1 for clarification.

"The 840 gpm (1.87 ft<sup>3</sup>/sec) increase in makeup cited above is a conservative value and represents a doubling of the evaluated value of 420 gpm (0.94 ft<sup>3</sup>/sec) to account for uncertainty. Since the makeup value increase is not a safety-related value and is used primarily in the context of the environmental impact evaluation, a more rigorous uncertainty analysis is not warranted."

Page 6, Section 3.3.2, paragraph 3, first sentence

The reference to ANO-2 FSAR section 9.2.4.2 is intended to refer to the updated FSAR, not the original FSAR. ANO-2 FSAR section 9.2.4.2 should be changed to ANO-2 SAR section 9.2.4.2 to be consistent with ANO's practice of referring to the updated FSAR as the SAR.

Page 6, Section 3.3.3, paragraph 1, first sentence

Same as previous comment. The reference to ANO-2 FSAR Section 10.4.5 should be changed to ANO-2 SAR Section 10.4.5.

Page 10, Table 2, item 2

The text for surface water should be changed to read, "There is only a small increase in water withdrawal (i.e., for consumption) rate from the lake. The maximum consumption rate will remain at 27 ft<sup>3</sup>/sec which is within permitted levels."

Page 11, Table 2, item 2

The value for maximum blowdown should be changed from 29 ft<sup>3</sup>/sec to 9.2 ft<sup>3</sup>/sec.

**Attachment 3**

**Licensee Identified Commitment for 2CAN010204**

COMMITMENT	TYPE	
	One-Time Action	Continuing Compliance
The $\leq 14\%$ failed fuel value for the reactor coolant pump shaft seizure accident will be maintained in the Safety Analysis Report for the duration of Cycle 16.	✓	