UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 28, 1994

Docket No. 50-368

Mr. Jerry W. Yelverton
Vice President, Operations ANO
Entergy Operations, Inc.
Route 3 Box 137G
Russellville, Arkansas 72801

Dear Mr. Yelverton:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI) REGARDING HUMAN ENGINEERING DISCREPANCY (HED) 040, ARKANSAS NUCLEAR ONE, UNIT 2 (ANO-2)

NRC would like to perform a review of HED 040. By letter dated November 22, 1989, you provided NRC with a status update and a listing of the Category 1 (safety-significant) HEDs identified during your detailed control room design review (DCRDR) for ANO-1&2, including a brief resolution summary, completion status, and/or schedule for each HED. In your letter, it was identified that ANO-2 HED 040 was reevaluated and reclassified from a Category 1 to a Category 2 HED (only Category 1 HEDs were required to have formal resolution schedules). However, NRC did not review the reclassification of HED 040.

As described in your November 22, 1989, letter, HED 040 addressed the fact that the control room air intake is located close to the emergency diesel generator exhaust. Under certain scenarios, when running the diesel generator, exhaust fumes are drawn into the control room. The November 22, 1989, letter states that operating procedure changes were implemented which essentially corrected this problem during routine diesel operations. Previously, when HED 040 was classified as a Category 1 HED, a design change was under consideration to automatically transfer the control room ventilation system to recirculation upon a diesel generator start signal.

NRC would like to better understand your basis for reclassifying HED 040, and licensee event report (LER) 50-368/91-008, "Control Room Ventilation Isolation Caused by Emergency Diesel Generator Exhaust Fumes in the Intake Air Duct," and has enclosed the following set of questions. In addition, please provide any other information you believe is relevant to understanding the HED or the LER. We request your response within 60 days of receipt of this letter.

The reporting requirements contained in this letter affect fewer than ten respondents; therefore, Office of Management and Budget clearance is not required under Public Law 96-511.

Sincerely,

ORIGINAL SIGNED BY:

Thomas W. Alexion, Project Manager
Project Directorate IV-1
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Enclosure:
RAI

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NAME	PNoonan	TAlexion/bc	MSlosson	JStrosnider	WBeckner
DATE	3/21/94	3/22/94	3/24/94	3/24/94	3/28/94
COPY	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO

OFFICIAL RECORD COPY Document Name: HED40.LTR

The reporting requirements contained in this letter affect fewer than ten respondents; therefore, Office of Management and Budget clearance is not required under Public Law 96-511.

Sincerely,

Thomas W. Alexion

Thomas W. Alexion, Project Manager
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Division of Reactor Projects - III/IV/V
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Enclosure:
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ENCLOSURE

QUESTIONS ON ANO-2 HED 040

1. Would the licensee's original proposed correction of the HED have prevented the LER-related event (LER 91-008)? Would automatic ventilation isolation have been defeated?

2. What has the licensee done to prevent this event from reoccurring again, beyond what is described in the LER?

3. Describe the formal operating procedure changes that were implemented to correct the HED. Under what conditions are these procedures applicable?

4. What informal operational discretions for realigning the control room ventilation system, if any, are there?

5. Are operators being trained on this event? If so, describe the training.

6. Has the licensee investigated how other utilities have addressed similar HEDs?

7. What is the composition and release rate of the diesel generator exhaust fumes? Specifically, what is the percentage of carbon monoxide and carbon dioxide?

8. What is the location (distance and elevation) of the diesel generator exhaust pipe relative to the control room air intake?

9. Has the licensee evaluated the quantity of carbon monoxide, carbon dioxide, and other combustion products that could collect in the control room during diesel generator operation to verify that the diesel generator fumes are merely an annoyance (assuming outside air is being supplied to the control room)?