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

February 4, 1992

Docket No. 50-368

Mr. Neil S. Carns
Vice President, Operations ANO
Entergy Operations, Inc.
Route 3 Box 137G
Russellville, Arkansas 72801

Dear Mr. Carns:

SUBJECT: CLARIFICATION REGARDING THE SAFETY EVALUATION FOR AMENDMENT NO. 127 TO FACILITY OPERATING LICENSE NO. NPF-6 - ARKANSAS NUCLEAR ONE, UNIT 2 (ANO-2) (TAC NO. M80705)

On December 17, 1991, the Commission issued Amendment No. 127 to Facility Operating License No. NPF-6 for ANO-2. The amendment revises Technical Specification (TS) 4.8.1.1.2.C.8.c to provide for conserving starting air for emergency diesel generators in case an engine fails to start on a safety injection signal. The license amendment is effective as of the next refueling outage, currently scheduled for August 1992, in which the applicable design change will be implemented. Subsequent to further review of the Safety Evaluation (SE) for Amendment No. 127, the licensee, by telecon on January 14, 1992, identified items included in the staff's SE which needed clarification.

This letter provides the enclosed revised page to the December 17, 1991, SE which incorporates the clarifications identified by the licensee. These clarifications do not alter our previous conclusion that the proposed design change and license amendment are acceptable. Also enclosed is corrected TS page 3/4 8-3 which was not revised but

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was provided as an overleaf page. Correction is being made by omitting Amendment No. 127 that was inadvertently incorporated on the overleaf page.

If you have any questions regarding this matter please contact us.

Sincerely,

ORIGINAL SIGNED BY

Sheri R. Peterson, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
As stated

cc w/enclosures:
See next page

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NAME	PNoonan	SPeterson	JLarkins		
DATE	01/24/92	01/29/92	01/4/92		

OFFICIAL RECORD COPY DOCUMENT NAME: CORRECT

cc:

Mr. Donald C. Hintz
Executive Vice President
and Chief Operating Officer
Entergy Operations, Inc.
P. O. Box 31995
Jackson, Mississippi 39286

Mr. Jerry Yelverton
General Manager, Plant Operations
Entergy Operations, Inc.
Route 3 Box 137G
Russellville, Arkansas 72801

Mr. Nicholas S. Reynolds
Winston & Strawn
1400 L Street, N.W.
Washington, D.C. 20005-3502

Mr. Robert B. Borsum
Licensing Representative
B&W Nuclear Technologies
1700 Rockville Pike, Suite 525
Rockville, Maryland 20852

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
1 Nuclear Plant Road
Russellville, Arkansas 72801

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Honorable Joe W. Phillips
County Judge of Pope County
Pope County Courthouse
Russellville, Arkansas 72801

Ms. Greta Dicus, Director
Division of Radiation Control
and Emergency Management
Arkansas Department of Health
4815 West Markham Street
Little Rock, Arkansas 72205-3867

Mr. John R. McGaha
Vice President, Operations Support
Entergy Operations, Inc.
P. O. Box 31995
Jackson, Mississippi 39286

Mr. Robert B. McGehee
Wise, Carter, Child & Caraway
P. O. Box 651
Jackson, Mississippi 39205

Mr. Charles B. Brinkman, Manager
Washington Nuclear Operations
ABB Combustion Engineering Nuclear Power
12300 Twinbrook Parkway, Suite 330
Rockville, Maryland 20852

Admiral Kinnaird R. McKee, USN (Ret)
214 South Morris Street
Oxford, Maryland 21654

Mr. James J. Fisicaro
Director, Licensing
Entergy Operations, Inc.
Route 3, Box 137G
Russellville, Arkansas 72801

SURVEILLANCE REQUIREMENTS (Continued)

3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.

4. Verifying the diesel starts from ambient condition and accelerates to at least 900 rpm in $\leq$ 15 seconds.

5. Verifying the generator is synchronized, loaded to 2850 Kw in $\leq$ 60 seconds, and operates for $\geq$ 60 minutes.

6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank obtained in accordance with ASTM-D270-65, is within the acceptable limits specified in Table 1 of ASTM D975-74 when checked for viscosity, water and sediment.

c. At least once per 18 months during shutdown by:

1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.

2. Verifying that the automatic sequence time delay relays are OPERABLE at their setpoint $\pm$ 10% of the elapsed time for each load block.

3. Verifying the generator capability to reject a load of $\geq$ 596 kw and maintain voltage at 4160 $\pm$ 500 volts and frequency at 60 $\pm$ 3 Hz.

4. Verifying the generator capability to reject a load of 2850 Kw without exceeding 75% of the difference between nominal speed and the overspeed trip setpoint, or 15% above nominal, whichever is lower.

5. Simulating a loss of offsite power by itself, and:

a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.

The staff position on bypass of EDG protective trips is contained in Regulatory Guide 1.9, Revision 2, Position 7, which recommends that the EDG be automatically tripped on engine overspeed and generator differential overcurrent. All other EDG protective trips should be handled in one of two ways: 1) a trip should be implemented with two or more measurements for each trip actuation; or 2) a trip may be bypassed under accident conditions, provided that the operator has sufficient time to react appropriately to an abnormal EDG condition. The design of the bypass circuitry should include the capability for 1) testing the status and operability of the bypass circuits, 2) alarming in the control room for abnormal values of all bypass parameters, and 3) manually resetting the trip bypass function.

The reason for bypassing non-critical protective functions is to ensure that the EDG will be available to mitigate the consequences of a design basis accident (DBA). EDG availability to mitigate a DBA is more critical than protecting the engine against minor problems that are not immediately detrimental to EDG operation.

The licensee states that following modification the engine start failure trip function will be initiated from coincidence logic employing two measurements (engine speed and coolant pressure). The licensee asserts that a start failure trip will be generated after 10 seconds from a start signal only under the following conditions: 1) engine speed is less than 250 rpm and 2) jacket coolant pressure is less than 8 psig.

Our review of the licensee's submittal and of other information obtained during subsequent teleconferences with the licensee's representatives indicates that the proposed design does not meet the conventional coincidence logic requirement for the independent measurements used to generate the trip parameter. In fact, following an engine start signal, the start failure trip is generated after 10 seconds unless interrupted by an engine-speed-greater-than-250-rpm signal or a jacket-coolant-pressure-greater-than-8-psig signal. It is the absence of both parameters that constitutes the start failure trip condition. Thus, the proposed design change does not introduce the potential--noted in Position 7 of Regulatory Guide 1.9--for spurious tripping of the diesel generator.

We have reviewed the licensee's submittal and have concluded that the proposed design change meets the intent of Regulatory Guide 1.9 and will enhance EDG availability during a spurious failure to start condition coincident with a loss of offsite power condition by conserving the engine-starting air supply. The change is therefore acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Arkansas State official was notified of the proposed issuance of the amendment. The State official had no comments.