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

OCT 16 1979

Docket Nos. 50-416
and 50-417

POOR ORIGINAL

Mr. N. L. Stampley, Vice President
Production and Engineering
Mississippi Power and Light Company
P. O. Box 1640
Jackson, Mississippi 39205

Dear Mr. Stampley:

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION
(Grand Gulf Nuclear Station, Units 1 and 2)

As a result of our review of the information contained in the Final Safety Analysis Report for the Grand Gulf Nuclear Station, Units 1 and 2, we have developed the enclosed requests for additional information.

We request that you amend your Final Safety Analysis Report to reflect your responses to the enclosed requests by November 30, 1979. If you cannot meet this date, please advise us of the date you can meet as soon as possible so that we may consider the need to revise our review schedule.

Please contact us if you desire any discussion or clarification of the enclosed requests.

Sincerely,

Robert L. Baer

Robert L. Baer, Chief
Light Water Reactors Branch No. 2
Division of Project Management

Enclosure:
Requests For Additional Information

cc: w/enclosure:
See next page

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ENCLOSURE

REQUESTS FOR ADDITIONAL INFORMATION
GRAND GULF NUCLEAR STATION
UNITS 1 AND 2
DOCKET NOS. 50-416 AND 50-417

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423.0 QUALITY ASSURANCE AND OPERATIONS

423.28 (14.2) The response to item 423.7 is not acceptable. Your plant's technical specifications will require that minor temporary changes to procedures covering test activities of safety-related equipment must be approved by two members of the plant management staff, at least one of which holds a Senior Reactor Operator's License on the affected unit. Since most, if not all, startup tests affect safety-related systems, this requirement applies to startup test procedures. (It does not apply to preoperational tests conducted before fuel loading.) However, FSAR Section 14.2.4 indicates that minor changes to startup test procedures may be made "on-the-spot" by the test supervisor (who is not required to hold a Senior Reactor Operator's License). Modify Section 14.2.4 to show that minor changes to startup test procedures will be made in accordance with your technical specification requirements.

423.29 (14.2) The response to item 423.10 indicates that testing will be conducted in accordance with Regulatory Guide 1.80, June 1974, with the exception listed on FSAR page 3A/1.80-1. Provide a description of this pre-operational test.

423.30 (14.2) The responses to some sub-parts of item 423.12, regarding Regulatory Guide 1.68, are not acceptable. Provide the information requested below.

1.e(2), 1.e(5), 1.e(6), 1.e(7), 1.e(8), 1.e(10), 1.e(11), 1.e(12), 1.f(1), 1.f(2), 1.g(1), 1.j(3), 1.J(16), 1.J(17), 1.l(8), 1.n(1), 1.n(2), 1.n(5), 1.n(6), 1.n(11), 1.n(14)(e)

Your response states that these systems and components will be tested as a part of your Acceptance Testing Program. It is our position that these systems and components are important to safety and should, therefore, be included in your preoperational test program. Provide a summary description of each of these tests and either (1) include these tests in your preoperational test program, or (2) provide a description of the administrative controls for the Acceptance Testing Program. If you decide on option (2), provide a sufficiently detailed description to enable us to determine that the review of acceptance test procedures, conduct of the tests, and review of the test results are commensurate with those of your preoperational test program.

1(h) Your response to this item does not address the leaktightness of structures which protect engineered safety features from flooding. It is our position that you perform appropriate tests to demonstrate the leaktightness of the doors and walls listed in Table 3.4-2. Provide descriptions of these tests.

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1.h(8) Your response to this item regarding tanks which support ECCS is garbled. Clarify your response.

1.i(1), 1.i(3), 1.i(4), 1.i(5), 1.i(6), 1.i(15), 1.i(19) Verify that the structural integrity test as described in FSAR Section 3.8 and the containment tests described in Section 6.2.6 are done as part of your preoperational test program.

1.i(21) Your response to this item states that no containment penetration coolers are used in your plant design. Provide a description of a startup test that will demonstrate that concrete temperatures surrounding hot penetrations (e.g., main steam lines) do not exceed design limits.

1.j(9) The response states that testing of the feedwater leakage control system will be added to preoperational test description No. 5, "Residual Heat Removal System Preoperational Test." Modify the test description to describe this testing.

1.m(3) Your response states that fuel pool leak detection and sectionalizing devices test will be conducted as part of the fuel pool cooling and cleanup system preoperational test (22). Modify the test description to describe this testing.

4.m Your response states that a leakage demonstration of the MSIV leakage control system is conducted as preoperational test No. 9. Apparently this test will be conducted at cold conditions. Provide a description of a test which demonstrates that the MSIV-LCS components operate properly when handling steam and that the system can handle the amount of leakage that is present when the main steam system is at operating temperature.

5.c.c. Your response does not address the liquid radwaste system. Provide a description of your startup test which demonstrates the processing of liquid radioactive wastes.

423.31 (14.2) Your response to item 423.13 is not totally acceptable. Provide the information requested below.

1. Reactor Protection System Preoperational Test (16) - It is not clear that you will account for the delay time of process-to-sensor hardware (e.g., instrument lines, valves, flow limiters) in your response time testing. Modify the test description to state how you will account for this delay time. Also, modify Test Procedure item c.5 of the test description to make it clear that your preoperational test will include all channels of each trip function for which response time tests are required by the Technical Specifications.

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2. Traversing Incore Probe (TIP) System Preoperational Test (18) - Modify the test description to delete the acceptance criterion addressing the squib charge.

3. Standby Service Water (SSW) System Preoperational Test (26) - Your response indicates that the leaktightness of valves that isolate the SSW system from other systems is addressed in the revised test description. However, this is not addressed by the test description. Expand the description to state how you will demonstrate the leaktightness of the valves which isolate the SSW system from the plant service water system and the component cooling water system.

4. Class 1E 125 Volt DC System Preoperational Test (39) - Your response states that preoperational test No. 44 demonstrates that the DC system loads are in accordance with battery sizing assumptions. However, it is not clear how this will be demonstrated. Modify the test description to state that the DC system load will be measured and verified to be consistent with battery sizing assumptions. Your response also refers to the response to item 041.31(f) for the minimum voltage demonstration. The response to item 041.31(f) does not state that the DC loads will be demonstrated to be operable at minimum voltage levels; it only states that the DC equipment is "specified" for operation over a range of 105 to 140 volts. It is our position that you demonstrate the operability of the DC system loads at the minimum voltage level at which they can be postulated to operate. Modify the test description to describe this demonstration.

423.32 (14.2) Your response to item 423.14 addressing several startup test descriptions is not totally acceptable. Provide the information requested below.

1. Main Steam Line Isolation Valves (25) - Your response stated that acceptance criteria for relief valve reset pressures are contained, "if applicable," in STI-26. It is our position that you demonstrate during your initial test program that the relief valves reclose at the correct pressures. Modify this test description (or other test descriptions as necessary) to state that the test procedure will contain acceptance criteria for relief valve reset pressure.

2. Shutdown From Outside the Main Control Room (28) - Your response states that the test description has been modified to show compliance with Regulatory Guide 1.68.2. On the contrary, the test description states that the reactor scram and MSIV isolation will be performed from inside the control room. It is our position that all actions be initiated from outside the control room. Modify the test description to comply with this position. Also modify the test description to clearly state that you will initiate the shutdown cooling mode of RHR from outside the control room and use it to partially cool down the plant (also from outside the control room).

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3. Recirculation System (30) - Modify the test description to (a) provide acceptance criteria for speed of the recirculation pump (following trip of the normal supply breaker) when the LFMG set breaker closes, (b) provide acceptance criteria for pump startup rates that are consistent with assumptions of FSAR Section 15.4.4, and (c) describe how you will verify that no cavitation occurs at allowable power and flow conditions.

4. Loss of Turbine-Generator and Offsite Power (31) - The loss of turbine-generator and offsite power should be maintained for a period of time sufficient to demonstrate that the necessary equipment, controls, and instrumentation are available following station blackout to remove decay heat from the core using only emergency power supplies. It is our position that you maintain the loss of offsite power for at least 30 minutes in order to demonstrate this. Modify the test description to state that offsite power will not be restored for at least 30 minutes.

423.33 (14.2) Your response to item 423.15 indicates that FSAR Table 14.2-3 has been modified to show that the MSIV full isolation will be conducted at Test Condition 6. On the contrary, this table still indicates that this demonstration may be performed at "anywhere > 75% power." Modify the table to indicate that the full isolation will be demonstrated at Test Condition 6.

423.34 (14.2) Your response to item 423.22 addresses preoperational tests. The item refers to post-fuel loading tests. Revise your response to item 423.22 to address only post-fuel loading startup tests (precritical tests, initial criticality, low-power tests, and power ascension tests).

423.35 (14.2) Your response to item 423.23 does not completely satisfy our requirements regarding the heat removal capability of ventilation systems serving areas that house engineered safety features. It is not apparent that post-accident design heat loads will be produced in ESF equipment rooms during the power ascension test phase; therefore, simply assuring that area temperatures remain within design limits during this period will probably not demonstrate the design heat removal capability of these systems. Modify your test descriptions to include measurement of air and cooling water temperatures and flows and the extrapolations that are necessary to verify that the ventilation systems can remove the postulated post-accident heat loads.

423.36 (14.2) Clarify the response to item 423.24 or the RCIC System startup test description (STI-14) to state that you will demonstrate at least five consecutive, successful, cold, quick RCIC system starts. (Note that all starts need not be reactor vessel injections.)

423.37 Modify Table 14.2-3 for STI-27 to show a turbine trip at greater than 60% power and a generator load reject at test condition 6.