SYSTEM ENERGY RESOURCES, INC.

December 2, 1988

U. S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D. C. 20555

Attention: Document Control Desk

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Fuel Handling Platform Surveillance Requirement
Proposed Amendment to the Operating License (PCOL-88/019)
AECM-88/0210

System Energy Resources, Inc. (SERI) is submitting by this letter a proposed amendment to the Grand Gulf Operating License. This proposed amendment changes the surveillance requirements for the Fuel Handling Platform to accommodate the addition of a new auxiliary hoist. This new auxiliary hoist is being added to the Fuel Handling Platform to facilitate the handling of control rods in the spent fuel pool.

In accordance with the provisions of 10 CFR 50.4 and 50.30, the signed original of the requested amendment is enclosed and the appropriate copies will be distributed. The attachment provides the technical justification and discussion to support the requested amendment. This amendment has been reviewed and accepted by the Plant Safety Review Committee and the Safety Review Committee.

Based on the guidelines presented in 10 CFR 50.92, SERI has concluded that this proposed amendment involves no significant hazards considerations.

In accordance with the requirements of 10 CFR 170.21, an application fee of $150 is attached to this letter.

SERI does not plan to move control rods in the spent fuel pool until after the upcoming refueling outage (RF03), and so is requesting a response to this amendment request by May 31, 1989. Further, SERI does not want this amendment request to detract from other amendment requests that are needed to support the upcoming refueling outage. However, SERI feels that it is appropriate to consider the potential need for this amendment during RF03.

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A Middle South Utilities Company

Therefore, as a contingency, SERI requests that a "Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for Hearing" be published for this proposed amendment by February 15, 1989.

Yours truly,

W. T. Cottle
Vice President, Nuclear Operations

WTC:rg
Attachments: 1. Remittance of $150 Application Fee
2. Affirmation per 10 CFR 50.30
3. GGNS PCOL-88/019

cc: Mr. T. H. Cloninger (w/a)
Mr. R. B. McGehee (w/a)
Mr. N. S. Reynolds (w/a)
Mr. H. L. Thomas (w/o)
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Dr. Alton B. Cobb (w/a)
State Health Officer
State Board of Health
Box 1700
Jackson, Mississippi 39205

BEFORE THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

LICENSE NO. NPF-29

DOCKET NO. 50-416

IN THE MATTER OF

MISSISSIPPI POWER & LIGHT COMPANY
and
SYSTEM ENERGY RESOURCES, INC.
and
SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

AFFIRMATION

I, W. T. Cottle, being duly sworn, state that I am Vice President, Nuclear Operations of System Energy Resources, Inc.; that on behalf of System Energy Resources, Inc., and South Mississippi Electric Power Association I am authorized by System Energy Resources, Inc. to sign and file with the Nuclear Regulatory Commission, this application for amendment of the Operating License of the Grand Gulf Nuclear Station; that I signed this application as Vice President, Nuclear Operations of System Energy Resources, Inc.; and that the statements made and the matters set forth therein are true and correct to the best of my knowledge, information and belief.

W. T. Cottle

STATE OF MISSISSIPPI
COUNTY OF HINDS

SUBSCRIBED AND SWORN TO before me, a Notary Public, in and for the County and State above named, this 2nd day of December, 1988.

(SEAL)

Linda W. Miller
Notary Public

My commission expires:

My Commission Expires Aug. 5, 1992

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A. SUBJECT

1. NL 88/015 Change to the Fuel Handling Platform Surveillance Requirements

2. Revised Technical Specification:

   a. Fuel Handling Platform Surveillance Requirements, 4.9.6.3.1 and 4.9.6.3.2

B. DISCUSSION

1. a) During refueling, the main hoist mast on the Fuel Handling Platform (FHP) will be tooled for movement of fuel assemblies only. Because the control rod (CR) grapple is not compatible with the main hoist mast, only the monorail auxiliary hoist is available for handling control rods. However, the area of the spent fuel pool containing the CR rack is normally inaccessible to the monorail hoist. To access the CR rack, the bridge-rail stops must be relocated, the main mast must be stowed, and the bridge-forward limit switch must be jumpered. This is a particular burden on outage schedules which require repetitive fuel handling followed by CR handling.

   b) With the addition of a new auxiliary hoist on the FHP the above actions are not required to move a control rod in this area. This will allow the rail stops, the limit switches and the appropriate refueling tools to remain in place. This change will allow SERI to save time and reduce the potential for a mishap occurring during those actions.

2. This proposed change to technical specifications is required for the following reasons:

   a) The Refueling Platform (RP) has an auxiliary hoist and a auxiliary monorail hoist. Both of these hoists are in technical specifications to ensure that the proper load is handled by each hoist.

   b) The FHP currently has only a monorail auxiliary hoist. The FHP monorail auxiliary hoist surveillance requirements are in technical specifications to ensure that the monorail auxiliary hoist has sufficient load capacity and load override switch for handling fuel assemblies or control rods.

   c) The proposed FHP auxiliary hoist would be used to handle control rods and a technical specification change is needed to ensure that the proposed auxiliary hoist has sufficient load capacity for handling control rods.

3. The proposed amendment adds surveillance requirements for a new auxiliary hoist to ensure sufficient load capacity for control rods and clarifies the surveillance requirements for the existing monorail auxiliary hoist on the FHP.

a) T.S. 4.9.6.3.1.d. The proposed amendment adds a reference to both the auxiliary hoist being added and the existing monorail auxiliary hoist. Also, since the proposed auxiliary hoist will not have a load override switch, reference to the load override switch is applicable only to the monorail auxiliary hoist.

b) T.S. 4.9.6.3.1.e. The proposed amendment adds the word monorail as only the monorail auxiliary hoist has a load override switch.

c) T.S. 4.9.6.3.2. The proposed amendment adds the word monorail as only the monorail auxiliary hoist has a load override switch.

C. JUSTIFICATION

1. The Refueling Platform (RP) has an auxiliary hoist, main hoist and auxiliary monorail hoist. The RP and FHP are manufactured by the same vendor and have similar structural design. The proposed auxiliary hoist for the FHP is manufactured by the same vendor and has the same design as the RP auxiliary hoist. The only significant difference between the RP and FHP is the interlocks on the RP prevent unsafe operation over the vessel during control rod movements.

2. The FHP is safety class 2 and seismic category I from a structural standpoint and will remain in these classifications with the addition of the auxiliary hoist.

3. The FHP does not share any structures, systems, or components with Unit 2 of Grand Gulf Nuclear Station as discussed in GDC-5.

4. The FHP proposed auxiliary hoist will not lift more than 550 pounds except during a load test. A load monitor disables upward hoist travel on all speeds for loads greater than 550 pounds. The load monitor is demonstrated operable 7 days prior to the FHP moving control rods or other equipment. The load monitor has no bypasses.

5. The FHP operator will be provided with a visual indication of the weight of the load lifted with the proposed auxiliary hoist.

6. Should it ever become necessary, the FHP load cell for the proposed auxiliary hoist will have the capability to have a variable load setpoint (less than or equal to 550 pounds) which can disable the hoist travel.

7. The FHP proposed auxiliary hoist will utilize a solid state electronic load sensing device with series connected redundant load limit output contacts that limit the maximum stress in load bearing material to 20% of ultimate strength. This provides a factor of safety of five based on ultimate strength of materials.

8. The proposed auxiliary hoist on the FHP will not lift spent or new fuel.

9. The FHP proposed auxiliary hoist has a mechanical and electrical brake. Both brakes together will hold up to 2000 pounds of load and a single break will hold 1000 pounds. Both brakes automatically engage on loss of electrical power. Additionally, the FHP auxiliary hoist has a mechanical load brake in the gear box. The function of the mechanical load brake is to prevent the load from dropping due to failure of either the mechanical or electrical brake.

10. The FHP proposed auxiliary hoist will be mounted on the main trolley and have hoist speeds of 10 and 30 feet per minute.

11. The FHP proposed auxiliary hoist is interlocked to prevent main hoist use with the auxiliary hoist in use as is the case with the RP.

12. The FHP main trolley is interlocked to prevent impact during operation with the outboard mechanical stops. The up and down hoist limit has a gear driven electrical interlock and a redundant mechanical clip stop to prevent over travel in the up direction.

13. The FHP auxiliary hoist is loaded in a preoperational test to 150% (min.) of rated capacity (500 pounds).

14. The lifting height of the proposed auxiliary hoist on the FHP is limited to less than 42 feet above the spent fuel racks, and a load drop of 550 pounds would be bounded by a non-fuel load drop from the existing monorail auxiliary hoist.

15. The proposed amendment adds a reference to both hoists on the FHP and the load override switch setting on the monorail auxiliary hoist to ensure sufficient load capacity for the appropriate hoist. (4.9.6.3.1d.) These changes are necessary to demonstrate both of the hoists redundant overload cutoffs. The addition of the reference to the monorail auxiliary hoists load override switch is required due to the fact that only the monorail auxiliary hoist has a load override switch.

16. The proposed amendment adds the word monorail to 4.9.6.3.1.e. This is necessary since only the monorail auxiliary hoist has a load override switch or a 1000 pound position. Therefore, only the monorail auxiliary hoist should have the redundant overload cutoffs verified in the 1000 pound position.

17. The proposed amendment will again add the word monorail to 4.9.6.3.2 to ensure that the load override switch is verified in the 500 pound position for the monorail auxiliary hoist except when engaged in new fuel movement. This addition to 4.9.6.3.2 is necessary because the load override switch should be in the lower load override position to provide the maximum load drop accident protection except when the 1000 pound position is used for new fuel movement.

D.. NO SIGNIFICANT HAZARDS CONSIDERATIONS

As discussed in 10CFR50.92, the following discussion is provided to the NRC Staff in support of no significant hazards considerations.

1. No significant increase in the probability or consequences of an accident previously evaluated results from this change.

   a. The accident previously evaluated is a Fuel Handling Accident. The probability of a Fuel Handling Accident is not significantly increased because the components being lifted would be lifted by the monorail auxiliary hoist if there were not an auxiliary hoist. The auxiliary hoist is designed, manufactured and installed with the same appropriate criteria as the monorail auxiliary hoist. Additionally the auxiliary hoist for the FHP is of the same design, manufacture and installation as the auxiliary hoist on the RP.

   b. The consequences of a fuel handling accident are not increased due to the fact that no new loads or lifting heights are introduced with the addition of the auxiliary hoist on the FHP. Additionally the Fuel Handling Accident fuel damage bounds the scenario of a load dropping from the auxiliary hoist on the FHP.

   c. The proposed changes in the Surveillance Requirements provide clarification to allow performance of the appropriate surveillance on the correct hoist. Thus there is not a significant increase in the probability or consequences of an accident previously evaluated involved in this change.

2. This change would not create the possibility of a new or different kind of accident from any previously evaluated.

   a. The fuel handling accident is the only accident possible. The fuel handling accident has been previously evaluated and bounds the fuel damage resulting from a load drop from the auxiliary hoist on the FHP.

   b. The RP currently has an auxiliary hoist of the same manufacture, design and installation. The FHP auxiliary hoist will not move spent fuel or new fuel. The RP and FHP auxiliary hoist load is limited to less than the load used in the fuel handling accident and the load lift height is limited to the height of the lift allowed for the RP auxiliary hoist. The load drop from the auxiliary hoist of the FHP is bounded in fuel damage by the Fuel Handling Accident.

   c. The proposed changes in the Surveillance Requirements will ensure that the correct hoist has the appropriate surveillance performed.

   d. Therefore this change will not create the possibility of a new or different kind of accident from any previously evaluated.

3. This change would not involve a significant reduction in the margin of safety.

   a. The design, manufacture, installation, load limits, up travel hoist limit, fuel handling exclusion and applicable interlocks define the margin of safety for the auxiliary hoist on the Fuel Handling platform. Since the FHP auxiliary hoist and the RP auxiliary hoist are not significantly different in these respects this change does not involve a significant reduction in the margin of safety.

   b. The proposed change ensures that the appropriate surveillance is performed on the correct hoist. This will verify that the redundant load limits for both the auxiliary hoists on the FHP and the load override switch on the monorail auxiliary hoist are operable and are in the correct position.