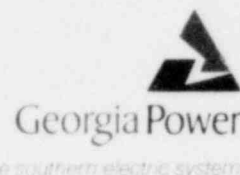


Georgia Power Company
353 Piedmont Avenue
Atlanta, Georgia 30308
Telephone 404 526-7020

Mailing Address
P.O. Office Box 4545
Atlanta, Georgia 30302

May 24, 1982



J. T. Beckham, Jr.
Vice President and General Manager
Nuclear Generation

Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR-57, NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNITS 1, 2
CONTROL OF HEAVY LOADS

Gentlemen:

In your letter of February 16, 1982 you requested that Georgia Power Company's (GPC) six-month report be revised to meet your December 22, 1980 request for information. The intent of NUREG-0612, as interpreted by GPC, is the assurance that the risk associated with heavy load handling is as low as reasonably achievable. This assurance can be achieved through a review of the controls for such load handling operations, and the accomplishment of improvements determined to be necessary by that review. We have performed a complete review of overhead handling systems at Plant Hatch, including the performance of conservative load drop analyses in those cases where the potential for a significant accident was determined to exist. The results of those analyses were reported in our six and nine month submittals. Table 1 (attached) summarizes our findings, and expands on our justification for the determination that no safety concern exists which has not been adequately addressed. It is our conclusion, based on this conservative approach, that no further review of the design bases for load handling systems is required to meet the intent of NUREG-0612.

I. Actions taken in response to NUREG-0612

As stated in our six-month report, a complete, systematic evaluation of overhead load handling systems at Plant Hatch Units 1 and 2 was performed. The purpose of the evaluation was to identify those load handling systems from which a dropped load could impact the reactor vessel, spent fuel, or equipment required for safe shutdown or decay heat removal; and to determine reasonable actions to reduce the risk and consequences of such an accident. Factors which affect this risk can be characterized as either "human" or "equipment" factors.

With respect to "human" factors, several changes were found to be appropriate as a results of this evaluation.

1. Safe load paths were defined per the guidelines of NUREG-0612, Section 5.1.1(1), where required.

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2. Procedures were developed and implemented per the guidelines of Section 5.1.1(2), where required.
3. Operator training is being implemented per the guidelines of Section 5.1.1(3).
4. Crane inspection, testing, and maintenance were begun in accordance with the guidelines of Section 5.1.1(6).
5. Special attention was given to procedures, equipment, and personnel for the handling of heavy loads over the reactor core.

Since historical data indicate that the majority of load handling accidents could have been avoided with improved operating and maintenance practices, (Ref: NUREG-0612 Sections 4.1-4.3) emphasis has been placed on this area.

With respect to "equipment" factors, the following actions were taken :

1. Credit was taken for cranes which satisfied the single failure proof requirements of NUREG-0612, Section 5.1.6. Because the design features of these cranes made the likelihood of a load drop extremely small, such an accident was not postulated.
2. In limited cases credit was taken for administrative controls imposed to prevent the movement of heavy loads over spent fuel or equipment required for safe shutdown or decay heat removal (see Table 1 items 28, 30, and 34).
3. Where cranes did not meet single failure proof criteria and administrative controls could not be imposed, the dropping of the load was assumed and the consequences of the drop analyzed. In all cases the consequences were shown to be acceptable for one of the following reasons (see Table 1):

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- A. Crane travel for the area/load combination is prohibited by electrical interlocks or mechanical stops.
- B. System redundancy and separation precludes loss of the capability of the particular system to perform its safety-related function following the load drop in the area.
- C. Site-specific considerations eliminate the need to consider the particular load/equipment combination.
- D. The likelihood of a handling system failure for this load is extremely small (i.e., Section 5.1.6 of NUREG-0612 satisfied).
- E. Analysis demonstrates that crane failure and load drop will not damage safety-related equipment.

II. JUSTIFICATION OF RESPONSE

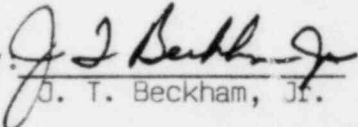
Georgia Power Company takes exception to the recommendations of NUREG-0612, sections 5.1.1 (4), (5), and (7) which address verification of design codes for cranes and lifting devices. These guidelines, in most cases, were not in effect at the time of manufacture of the Plant Hatch lifting devices. Our evaluation to determine the value of meeting these recommendations (section 5.1.1 (4), (5), and (7)) led us to conclude that no perceptible increase in plant safety would result, and therefore, that the expenditure of manpower resources would not be justified. Measures have already been taken to address the remaining recommendations of section 5.1.1 as previously discussed. These measures, with the elimination of concerns regarding hazards previously discussed, are more than suitable alternatives to the "after-the-fact" design code verification. We feel that Georgia Power Company's approach meets

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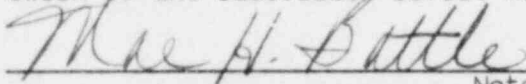
the intent and achieves the objectives of NUREG-0612 as stated in section 5.1, and it is our position that no further action is required beyond those already taken or underway.

J. T. Beckham, Jr. states that he is a Vice President of Georgia Power Company and is authorized to execute this oath on behalf of Georgia Power Company, and that to the best of his knowledge and belief the facts set forth in this letter are true.

GEORGIA POWER COMPANY

By: 
J. T. Beckham, Jr.

Sworn to and subscribed before me this 24th day of May, 1982



Notary Public, Georgia, State at Large
My Commission Expires Sept. 20, 1983

Notary Public

WEB/mb

Enclosure

xc: H. C. Nix
R. F. Rogers, III
J. P. O'Reilly (NRC-Region II)

TABLE 1

<u>Item No.</u>	<u>Name</u>	<u>Justification of Exclusion from Paragraph 2.1.1, Enclosure (3)</u>	<u>Hazard Elimination Category</u>
1.	HNP-1 HPCI Pump and Turbine Hoist	Major maintenance would not be undertaken when the system is required to be operational. In addition, redundant systems, the RCIC or ADS Systems, could be used in the event of damage to HPCI components.	B
2.	HNP-1 RHR Pump and Core Spray Pump Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
3.	HNP-1 RHR Heat Exchanger Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
4.	HNP-1 RHR Pump and Core Spray Pump Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
5.	HNP-1 RHR Heat Exchanger Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
6.	HNP-1 Recirc. Motor MG Set "A" Hoist	Imposed lift height restrictions; Technical Specifications require plant shutdown when recirculation not available, therefore lifting would not occur while operating.	C,E

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TABLE 1 (Continued)

<u>Item No.</u>	<u>Name</u>	<u>Justification of Exclusion from Paragraph 2.1.1, Enclosure (3)</u>	<u>Hazard Elimination Category</u>
7.	HNP-1 Recirc. Motor MG Set "B" Hoist	Imposed lift height restrictions; Technical Specifications require plant shutdown when recirculation not available, therefore lifting would not occur while operating.	C,E
8.	HNP-2 CRD Pump and Hatch Hoist	No essential equipment located in load path.	E
9.	HNP-2 RCIC Pump, Turbine and Hatch Hoist	No essential equipment located in load path.	E
10.	HNP-2 Core Spray Pump "A" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
11.	HNP-2 RHR Pump "A" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
12.	HNP-2 RHR Pump "C" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
13.	HNP-2 RHR Heat Exchanger "A" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
14.	HNP-2 Core Spray Pump "B" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B

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TABLE 1 (Continued)

<u>Item No.</u>	<u>Name</u>	<u>Justification of Exclusion from Paragraph 2.1.1, Enclosure (3)</u>	<u>Hazard Elimination Category</u>
15.	HNP-2 RHR Pump "D" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
16.	HNP-2 RHR Pump "B" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
17.	HNP-2 RHR Heat Exchanger "B" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
18.	HNP-2, HPCI Pump and Turbine Hoist	Major maintenance would not be undertaken when the system is required to be operational. In addition, redundant systems, the RCIC or ADS Systems, could be used in the event of damage to HPCI components.	B
19.	HNP-2, Recirc. Pump MG Set "A" Hoist	Imposed lift height restrictions; Technical Specifications require plant shutdown when recirculation not available, therefore lifting would not occur while operating.	C,E
20.	HNP-2, Recirc. Pump MG Set "B" Hoist	Imposed lift height restrictions; Technical Specifications require plant shutdown when recirculation not available, therefore lifting would not occur while operating.	C,E
21.	HNP-2, Chiller Unit "A" Hoist	No impact on safe shutdown equipment.	E
22.	HNP-2, Chiller Unit "B" Hoist	No impact on safe shutdown equipment.	E

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TABLE 1 (Continued)

<u>Item No.</u>	<u>Name</u>	<u>Justification of Exclusion from Paragraph 2.1.1, Enclosure (3)</u>	<u>Hazard Elimination Category</u>
23.	Diesel Generator "1A" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
24.	Diesel Generator "1B" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
25.	Diesel Generator "1C" Hoist	The worst case drop analyzed would result in sufficient safety grade system, being available to achieve and maintain safe shut-down conditions.	B
26.	Diesel Generator "2A" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
27.	Diesel Generator "2B" Hoist	The worst case drop analyzed would result in sufficient safety grade systems being available to achieve and maintain safe shut-down conditions.	B
28.	HNP-1, Turbine Building Over-head Crane	The limited clearance between the top of the control building and the turbine building overhead crane will not permit transporting a load over the control building. Movement of the Control Building Ventilation and Air Conditioning Equipment will be controlled by adherence to our established safe load path and an operational procedure	C

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TABLE 1 (Continued)

<u>Item No.</u>	<u>Name</u>	<u>Justification of Exclusion from Paragraph 2.1.1, Enclosure (3)</u>	<u>Hazard Elimination Category</u>
29.	HNP-1 and 2 Water Intake Structure Mobile Crane	Movement of plant equipment in this area will require the use of a mobile crane. Our evaluation of the plant equipment located in this area revealed that a load drop would have no impact on safe shutdown or decay heat removal due to sufficient physical separation complete with steel barriers from essential equipment and the use of redundant systems.	C,E
30.	HNP-2 Turbine Building Overhead Crane	The limited clearance between the top of the control building and the turbine building overhead crane will not permit transporting a load over the control building. Movement of the Control Building Ventilation and Air Conditioning Equipment will be controlled by adherence to our established safe load path and an operational procedure.	C
31.	HNP-1 Reactor Building Overhead Crane	HNP-1 Reactor Building Overhead Crane has been modified to be single-failure proof. Use of this crane will be controlled by strict administrative procedures and will follow established safe load paths. For further information, refer to Section 10.20.5 in the HNP-1 FSAR.	D
32.	HNP-1 Refueling Platform Monorail	No impact on safe shutdown equipment. Used to handle fuel assemblies between the fuel pool and the reactor vessel.	E
33.	HNP-1 Spent Fuel Pool Jib Crane	No impact on safe shutdown equipment. This 0.5 ton capacity crane is used to assist fuel assembly movement in the spent fuel pool.	E

TABLE 1 (Continued)

<u>Item No.</u>	<u>Name</u>	<u>Justification of Exclusion from Paragraph 2.1.1, Enclosure (3)</u>	<u>Hazard Elimination Category</u>
34	HNP-2 Reactor Building Over-head Crane	Use of this crane is procedurally restricted. It is not single-failure proof. It will not be used over any equipment required to reach and maintain cold shutdown. Drops of reactor internals required to be moved by this crane have been analyzed and determined to meet the evaluation criteria of Section 5.1.4 (2) of NUREG-0612.	C,E
35.	HNP-2 Refueling Platform Monorail	No impact on safe shutdown equipment. Used to handle fuel assemblies between the fuel pool and the reactor vessel.	E
36.	HNP-2 Spent Fuel Pool Jib Crane	No impact on safe shutdown equipment. This 0.5 ton capacity crane is used to assist fuel assembly movement in the spent fuel pool.	
37.	HNP-1 MSIV "A" Hoist	Plant will be shutdown prior to maintenance in this area. A load drop would not impact on essential equipment for safe shutdown or decay heat removal. The redundant MSIV's will assure primary system integrity.	B,C,E
38.	HNP-1 MSIV "B" Hoist	Plant will be shutdown prior to maintenance in this area. A load drop would not impact on essential equipment for safe shutdown or decay heat removal. The redundant MSIV's will assure primary system integrity.	B,C,E
39.	HNP-1 MSIV "C" Hoist	Plant will be shutdown prior to maintenance in this area. A load drop would not impact on essential equipment for safe shutdown or decay heat removal. The redundant MSIV's will assure primary system integrity.	B,C,E

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TABLE 1 (Continued)

<u>Item No.</u>	<u>Name</u>	<u>Justification of Exclusion from Paragraph 2.1.1, Enclosure (3)</u>	<u>Hazard Elimination Category</u>
40.	HNP-1 MSIV "D" Hoist	Plant will be shutdown prior to maintenance in this area. A load drop would not impact on essential equipment for safe shutdown or decay heat removal. The redundant MSIV's will assure primary system integrity.	B,C,E
41.	HNP-2 RWCU Regen. Hx Trolley	Sufficient physical separation from load impact to essential safety-related equipment.	E
42.	HNP-2 RWCU Non-regen. Hx Trolley	Sufficient physical separation from load impact to essential safety-related equipment.	E
43.	HNP-2 Fuel Pool Cooling Hx Hoist	Sufficient physical separation from load impact to essential safety-related equipment.	E
44.	HNP-2 CRD Repair Area Monorail	Sufficient physical separation from load impact to essential safety-related equipment.	E
45.	HNP-1 CRD Repair Area Jib Crane Hoist	Sufficient physical separation from load impact to essential safety-related equipment.	E
46.	HNP-2 MSIV Bridge Crane	Plant will be shutdown prior to maintenance in this area. A load drop would not impact on essential equipment for safe shutdown or decay heat removal. The redundant MSIV's will assure primary system integrity.	B,C,E