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SUBJECT: Forwards response to NRC Bulletin 96-002, "Movement of Heavy Loads Over Spent Fuel, Over Fuel in Reactor Core or Over Safety-Related Equipment."

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Carolina Power & Light Company  
PO Box 165  
New Hill NC 27562

William R. Robinson  
Vice President  
Harris Nuclear Plant

MAY 13 1996

SERIAL: HNP-96-086

United States Nuclear Regulatory Commission  
ATTENTION: Document Control Desk  
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
NRC BULLETIN 96-02, MOVEMENT OF HEAVY LOADS OVER SPENT FUEL, OVER  
FUEL IN THE REACTOR CORE, OR OVER SAFETY-RELATED EQUIPMENT  
30 DAY RESPONSE

Ladies and/or Gentlemen:

NRC Bulletin 96-02, "Movement of Heavy Loads Over Spent Fuel, Over Fuel In The Reactor Core, Or Over Safety-Related Equipment," dated April 11, 1996, requested that certain actions be taken regarding movement of heavy loads. A response was required in accordance with 10 CFR 50.54(f) within thirty days of the date of the bulletin. The required response is the enclosure to this letter.

Questions regarding this matter may be referred to Mr. T. D. Walt at (919) 362-2711.

Sincerely,

DBA/dba

Enclosure

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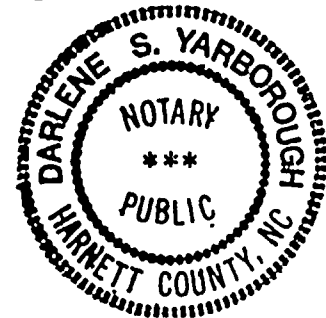
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W. R. Robinson, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are employees, contractors, and agents of Carolina Power & Light Company.

*Darlene S. Yarbrough*  
Notary (Seal)

My commission expires: 2-6-2000

c: Mr. J. B. Brady, HNP NRC Senior Resident Inspector  
Mr. S. D. Ebnetter, NRC Regional Administrator, Region 2  
Mr. N. B. Le, NRR Project Manager



Harris Nuclear Plant  
Response to NRC Bulletin 96-02  
"Movement Of Heavy Loads  
Over Spent Fuel, Over Fuel In The Reactor Core,  
Or Over Safety-Related Equipment"

NRC Bulletin 96-02, "Movement Of Heavy Loads Over Spent Fuel, Over Fuel In The Reactor Core, Or Over Safety-Related Equipment," dated April 11, 1996, requested that licensees take the following actions.

"To ensure that the handling of heavy loads is performed safely and within the conditions and requirements specified under Title 10 of the *Code of Federal Regulations*, all addressees are requested to take the following actions:

- Review plans and capabilities for handling heavy loads while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) in accordance with existing regulatory guidelines. Determine whether the activities are within the licensing basis and, if necessary, submit a license amendment request. Determine whether changes to Technical Specifications will be required in order to allow the handling of heavy loads (e.g., the dry storage canister shield plug and associated lifting devices) over fuel assemblies in the spent fuel pool."

The Bulletin required the following required responses.

- "(1) For licensees planning to implement activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment within the next 2 years from the date of this bulletin, provide the following:
  - A report, within 30 days of the date of this bulletin, that addresses the licensee's review of its plans and capabilities to handle heavy loads while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) in accordance with existing regulatory guidelines. The report should also indicate whether the activities are within the licensing basis and should include, if necessary, a schedule for submission of a license amendment request. Additionally, the report should indicate whether changes to Technical Specifications will be required.
- (2) For licensees planning to perform activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) and that involve a potential load drop accident that has not previously been evaluated in the FSAR, submit a license amendment request in advance (6-9 months) of the planned movement of the loads so as to afford the staff sufficient time to perform an appropriate review.

- (3) For licensees planning to move dry storage casks over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled) include in item 2 above, a statement of the capability of performing the actions necessary for safe shutdown in the presence of radiological source term that may result from a breach of the dry storage cask, damage to the fuel, and damage to safety-related equipment as a result of a load drop inside the facility.
- (4) For licensees planning to perform activities involving the handling of heavy loads over spent fuel, fuel in the reactor core, or safety-related equipment while the reactor is at power (in all modes other than cold shutdown, refueling, and defueled), determine whether changes to Technical Specifications will be required in order to allow the handling of heavy loads (e.g., the dry storage canister shield plug) over fuel assemblies in the spent fuel pool and submit the appropriate information in advance (6-9 months) of the planned movement of the loads for NRC review and approval."

The Harris Nuclear Plant (HNP) staff has completed the review discussed in the Requested Actions, and provides the following responses.

Response 1

HNP has no plans to handle any heavy loads or use different load paths over spent fuel or fuel in the reactor core within the next 2 years while the reactor is at power (modes other than cold shutdown, refueling, and defueled).

Movement of heavy loads over safety related equipment is controlled in accordance with HNP's procedure "Operation, Testing, Maintenance and Inspection of Cranes and Special Lifting Equipment". An earlier version of this procedure was included in Carolina Power & Light's June 2, 1986 correspondence to the NRC in response to the NRC's December 22, 1980 Generic Letter regarding Control of Heavy Loads. This program was accepted by the NRC as documented in Supplement 4 of the Shearon Harris Safety Evaluation Report (SER). Subsequently there have been six revisions to this procedure in accordance with Technical Specification 6.5.1 and 10 CFR50.59. As part of the requested actions for this bulletin, these six revisions were reviewed to confirm that the program is still being implemented within the licensing basis. Significant changes made by these revisions include the following:

Additions to approved safe load paths: (a) an alternate safe load path for reactor coolant pump hatch covers and (b) outside the containment building in the area of the Refueling Water Storage Tank and waste gas decay tanks for removal of items from the reactor containment building equipment hatch area.

Additions to the heavy load listing, e.g., reactor vessel stud and nut cleaning machine and permanent cavity seal ring segments.

Addition to equipment available for handling heavy loads, e.g., a vendor crane to be used outside plant buildings.

An IF-300 Spent Fuel Shipping Cask is routinely handled in the Fuel Handling Building during power operations. The cask could be in one of two configurations; empty or loaded with spent fuel from the H. B. Robinson Steam Electric Plant or the Brunswick Steam Electric Plant. As described in the FSAR, engineered features, safe load paths and storage pool isolation preclude movement of the cask over spent fuel. Section 9.1.4.2.2.7 of the FSAR and provides a description of these features as well as noting that a cask drop should not damage safety related equipment.

No Technical Specification changes or license amendments for handling heavy loads are anticipated at this time.

#### Response 2

HNP currently has no plans which would require handling of heavy loads or use of different load paths when the reactor is at power that would create the potential for load drop accidents that have not been evaluated and included in the HNP procedure for heavy loads. If plans develop, the activity will be evaluated under existing programs per 10 CFR50.59. If a previously unanalyzed load path or load drop accident is determined to constitute an unreviewed safety question, it will be submitted to the NRC for approval prior to implementation.

#### Response 3

HNP has no plans to that would require movement of dry storage cask(s) over spent fuel, fuel in the reactor core, or safety related equipment while the reactor is at power (modes other than cold shutdown, refueling, and defueled).

#### Response 4

HNP has no plans to handle any heavy loads or use different load paths over spent fuel or fuel in the reactor core within the next 2 years while the reactor is at power (modes other than cold shutdown, refueling, and defueled). If such plans develop, current procedure requirements for safety evaluations will require an license amendment or NRC review and approval prior to implementation.



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