

Mr. J. S. Keenan, Vice President
 Carolina Power & Light Company
 H. B. Robinson Steam Electric Plant,
 Unit No. 2
 3581 West Entrance Road
 Hartsville, South Carolina 29550

March 2, 1998

**SUBJECT: ENVIRONMENTAL ASSESSMENT OF REQUEST FOR EXEMPTION FROM
 10 CFR 70.24 CRITICALITY ACCIDENT REQUIREMENTS - H. B. ROBINSON
 STEAM ELECTRIC PLANT, UNIT NO. 2 (TAC NO. M98709)**

Dear Mr. Keenan:

The staff has prepared an environmental assessment in response to your request for exemption dated April 23, 1997, as supplemented August 27, 1997. In your application, you requested an exemption from certain requirements of 10 CFR 70.24, "Criticality Accident Requirements" for H. B. Robinson, Unit No. 2.

We have enclosed a copy of the Environmental Assessment and Finding of No Significant Impact of the proposed exemption which is being forwarded to the Office of the Federal Register for publication.

Sincerely,
 (Original Signed By)
 Joseph W. Shea, Project Manager
 Project Directorate II-1
 Division of Reactor Projects - I/II
 Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosure: Environmental Assessment

cc w/encl: See next page

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Mr. J. S. Keenan
Carolina Power & Light Company

H. B. Robinson Steam Electric
Plant, Unit No. 2

cc:

Mr. William D. Johnson
Vice President and Senior Counsel
Carolina Power & Light Company
Post Office Box 1551
North Carolina 27602

Mr. Mel Fry, Acting Director
N.C. Department of Environment,
Health and Natural Resources
Division of Radiation Protection Raleigh,
3825 Barrett Dr.
Raleigh, North Carolina 27609-7721

Ms. Karen E. Long
Assistant Attorney General
State of North Carolina
Post Office Box 629
Raleigh, North Carolina 27602

Mr. Robert P. Gruber
Executive Director
Public Staff - NCUC
Post Office Box 29520
Raleigh, North Carolina 27626-0520

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
H. B. Robinson Steam Electric Plant
2112 Old Camden Road
Hartsville, South Carolina 29550

Mr. Max Batavia, Chief
South Carolina Department of Health
Bureau of Radiological Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30303

Ms. D. B. Alexander
Manager
Performance Evaluation and
Regulatory Affairs
Carolina Power & Light Company
412 S. Wilmington Street
Raleigh, North Carolina 27601

Mr. J. W. Moyer
Plant General Manager
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant
Unit No. 2
3581 West Entrance Road
Hartsville, South Carolina 29550

Mr. Milton Shymlock
U. S. Nuclear Regulatory Commission
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, Georgia 30303

Public Service Commission
State of South Carolina
Post Office Drawer 11649
Columbia, South Carolina 29211

Mr. T. M. Wilkerson
Manager - Regulatory Affairs
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant,
Unit No. 2
3581 West Entrance Road
Hartsville, South Carolina 29550-0790

Mr. H. K. Chernoff
Supervisor, Licensing/Regulatory Programs
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant,
Unit No. 2
3581 West Entrance Road
Hartsville, South Carolina 29550

Mr. Heinz Mueller (5 copies)
Environmental Review Coordinator
345 Courtland Street, NE
Atlanta, GA 30365

UNITED STATES NUCLEAR REGULATORY COMMISSION
CAROLINA POWER & LIGHT COMPANY
DOCKET NO. 50-261
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from the requirements of 10 CFR 70.24 to Carolina Power & Light Company (CP&L or the licensee) for operation of the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR) located at the licensee's site in Darlington County, South Carolina.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action:

The proposed action would exempt the licensee from the requirements of 10 CFR 70.24(a), which requires in each area in which special nuclear material is handled, used, or stored a monitoring system that will energize clear audible alarms if accidental criticality occurs. The proposed action would also exempt the licensee from the requirements to maintain emergency procedures for each area in which this licensed special nuclear material is handled, used, or stored to ensure that all personnel withdraw to an area of safety upon the sounding of the alarm, to familiarize personnel with the evacuation plan, and to designate responsible individuals for determining the cause of the alarm, and to place radiation survey instruments in accessible locations for use in such an emergency.

The proposed action is in accordance with the licensee's application for exemption dated April 23, 1997, as supplemented by letter dated August 27, 1997.

The Need for the Proposed Action:

The purpose of 10 CFR 70.24 is to ensure that, if a criticality were to occur during the handling of special nuclear material, personnel would be alerted to that fact and would take

appropriate action. At a commercial nuclear power plant, the inadvertent criticality with which 10 CFR 70.24 is concerned could occur during fuel handling operations. The special nuclear material that could be assembled into a critical mass at a commercial nuclear power plant is in the form of nuclear fuel; the quantity of other forms of special nuclear material that is stored on site is small enough to preclude achieving a critical mass. Because the fuel is not enriched beyond 5.0 weight percent Uranium-235 and because commercial nuclear plant licensees have procedures and design features that prevent inadvertent criticality, the staff has determined that it is unlikely that an inadvertent criticality could occur due to the handling of special nuclear material at a commercial power reactor. The requirements of 10 CFR 70.24(a), therefore, are not necessary to ensure the safety of personnel during the handling of special nuclear materials at commercial power reactors. However, an exemption to 10 CFR 70.24(a) is needed to permit a deviation from these requirements.

Environmental Impacts of the Proposed Action:

The Commission has completed its evaluation of the proposed action and concludes that the proposed action involves features located entirely within the protected area as defined in 10 CFR Part 20.

The proposed action will not result in an increase in the probability or consequences of accidents or result in a change in occupational or offsite dose. Therefore, there are no radiological impacts associated with the proposed action.

The proposed action will not result in a change in nonradiological plant effluents and will have no other nonradiological environmental impact.

Accordingly, the Commission concludes that there are no environmental impacts associated with this action.

Alternatives to the Proposed Action:

Since the Commission has concluded that there is no measurable environmental impact associated with the proposed action, any alternatives with equal or greater environmental impact need not be evaluated. As an alternative to the proposed exemption, the staff considered denial of the requested exemption. Denial of the request would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in the "Final Environmental Statement Related to the Operation of H. B. Robinson Nuclear Steam Electric Plant, Unit 2," dated April 1975.

Agencies and Persons Consulted:

In accordance with its stated policy, on February 10, 1998, the staff consulted with the South Carolina State official, Virgil Autry, South Carolina Department of Health, Bureau of Radiological Health and Environmental Control. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

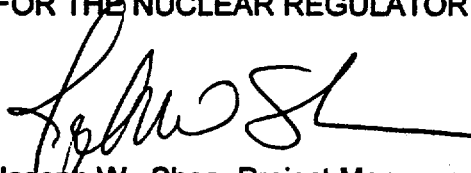
Based upon the environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letters dated April 23 and August 27, 1997, which are available for public inspection at the Commission's Public Document Room, which is located at The Gelman Building, 2120 L Street, NW.,

Washington, DC, and at the local public document room located at the Hartsville Memorial Library, 147 West College Avenue, Hartsville, South Carolina 29550.

Dated at Rockville, Maryland, this 2nd day of February 1998.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read 'J. W. Shea', with a long horizontal stroke extending to the right.

Joseph W. Shea, Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation