

March 10, 2005

Mr. J. W. Moyer
Vice President - HBRSEP, Unit No. 2
Progress Energy Carolinas, Inc.
Robinson Nuclear Plant
3581 West Entrance Road
Hartsville, SC 29550

SUBJECT: NOTICE OF ISSUANCE OF ENVIRONMENTAL ASSESSMENT FOR THE H. B. ROBINSON, UNIT 2, INDEPENDENT SPENT FUEL STORAGE INSTALLATION APPLICATION FOR LICENSE RENEWAL (TAC NO. L23716)

Dear Mr. Moyer:

By letter dated February 27, 2004, as supplemented, you submitted an application to the U.S. Nuclear Regulatory Commission (NRC) requesting a site-specific license renewal in accordance with 10 CFR Part 72 for an independent spent fuel storage installation (ISFSI) at the H. B. Robinson Steam Electric Plant, Unit 2 (HBRSEP). As part of the application, you submitted an Environmental Report (ER), as required by 10 CFR 72.34. The NRC staff has completed its environmental review for this action. The staff concludes that there are no significant radiological or non-radiological impacts associated with the proposed action, and that issuance of a renewal of the license for the interim storage of spent nuclear fuel at the HBRSEP ISFSI will have no significant impact on the quality of the human environment. A Notice of Issuance of Environmental Assessment and No Significant Impact (FONSI), and the NRC staff's Environmental Assessment related to the continued operation of the HBRSEP ISFSI are enclosed for you information. The Notice has been forwarded to the Office of the Federal Register for publication.

Our decision on your license renewal application will be addressed in future correspondence, which will include the staff's safety evaluation report. If you have any questions regarding this matter, please contact me at (301) 415-1179. Please refer to Docket No. 72-3 and TAC No. L23716 in future correspondence related to our review of this renewal application.

Sincerely,
/RA/
Christopher M. Regan, Senior Project Manager
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Docket No. 72-3
TAC No. L23716

Enclosure: 1) Environmental Assessment
2) Federal Register Notice

cc: Mailing List

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OFFICIAL RECORD COPY

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U.S. NUCLEAR REGULATORY COMMISSION
DOCKET NO. 72-03
PROGRESS ENERGY CAROLINAS, INCORPORATED
NOTICE OF ISSUANCE OF AN ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT
FOR LICENSE RENEWAL OF THE H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2
INDEPENDENT SPENT FUEL STORAGE INSTALLATION

ACTION: Environmental Assessment

FOR FURTHER INFORMATION CONTACT: Christopher M. Regan, Senior Project Manager, Mail Stop O 13D13, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Telephone: (301) 415-1179; fax number: (301) 415-1179; e-mail: cmr1@nrc.gov.

SUPPLEMENTARY INFORMATION:

The U.S. Nuclear Regulatory Commission (NRC or the Commission) is considering renewing Carolina Power and Light Company (CP&L) now doing business as Progress Energy Carolinas, Inc. (PEC's) (the applicant's) License No. SNM-2502 under the requirements of Title 10 of the Code of Federal Regulations, Part 72 (10 CFR Part 72) authorizing the continued operation of the H. B. Robinson Steam Electric Plant, Unit 2 (HBRSEP) Independent Spent Fuel Storage Installation (ISFSI) located at the HBRSEP in Darlington County, South Carolina. The Commission's Office of Nuclear Material Safety and Safeguards has completed its review of the environmental report submitted by the applicant on February 27, 2004, in support of its application for a renewed materials license. The staff's "Environmental Assessment related to the renewal of the H. B. Robinson Independent Spent Fuel Storage Installation" has been issued in accordance with 10 CFR Part 51.

I. SUMMARY OF ENVIRONMENTAL ASSESSMENT (EA)

Description of the Proposed Action: The proposed licensing action would authorize the applicant to continue operating a dry storage ISFSI at the HBRSEP site. The purpose of the ISFSI is to allow for interim spent fuel storage and, indirectly, power generation capability, beyond the term of the current ISFSI license to meet future power generation needs. The current license will expire August 31, 2006. The renewed ISFSI license would permit 40 additional years of storage beyond the current license period. The current ISFSI employs the NUHOMS® system for horizontal, dry storage of irradiated fuel assemblies in concrete modules licensed for use at the HBRSEP ISFSI. Currently, the facility is licensed to store 56 spent fuel assemblies contained in 8 steel dry shielded canisters, 7 fuel assemblies to a canister, housed in 8 horizontal storage modules.

Need for the Proposed Action: The HBRSEP ISFSI is needed to provide continued spent fuel storage capacity so that the HBRSEP can continue to generate electricity. This renewal is needed to provide an option that allows for interim spent fuel storage and, indirectly, power generation capability, beyond the term of the current ISFSI license to meet future system generating needs. The renewed ISFSI license would permit 40 additional years of storage beyond the current license period and transfer to a Federal repository for permanent disposal of the waste. An exemption would allow an additional 20 years of storage beyond the renewal period for a total of 40 years beyond the original licensed period.

Environmental Impacts of the Proposed Action: The NRC staff has concluded that the license renewal of the HBRSEP ISFSI will not result in a significant impact to the environment. The prior NRC Environmental Assessment associated with the issuance of Materials License SNM-2502 continues to form the basis for assessing the potential environmental impacts of the proposed license renewal action. The environmental impacts associated with the proposed action concentrate on only those impacts projected to occur during the requested 40 year license renewal time period. Environmental impacts include the potential direct effects on the ambient environment and its resources. These potential impacts can be categorized as non-radiological and radiological impacts.

There will be no significant radiological or non-radiological environmental impacts from routine operation of the HBRSEP ISFSI during the extended period of operation. The ISFSI is essentially a passive facility with no liquid and gaseous effluents released from the ISFSI that exceed Federal regulatory limits. The continued operation of the HBRSEP ISFSI will result in

no change to the current impact on land use, water resources, air quality, generation of wastewater, geology, biota, cultural resources, and area demographics and socio-economics. The HBRSEP ISFSI is in its completed configuration and as such there will be no environmental impacts from construction activities. The staff does not expect operation of the HBRSEP ISFSI for an additional period of 40 years to impact any threatened or endangered species. The radiological dose rates from the ISFSI will be limited by the design of the horizontal storage module. The total occupational dose to workers at the HBRSEP site resulting from continued ISFSI operation will have a small impact on workers or the public, but all occupational doses must be maintained below the limits specified in 10 CFR Part 20. The annual dose to the nearest resident from HBRSEP ISFSI activities remains significantly below the annual dose limits specified in 10 CFR 72.104 and 10 CFR 20.1301. The cumulative dose to an individual offsite from all site activities will be less than the limits specified in 10 CFR 72.104 and 10 CFR 20.1301. These doses are also a small fraction of the doses resulting from naturally-occurring terrestrial and cosmic radiation of about 300 mrem/yr in the vicinity of the HBRSEP ISFSI. Additionally, occupational doses received by facility workers will not exceed the limits specified in 10 CFR 20.1201. For hypothetical accidents, the calculated dose to an individual at the nearest site boundary is well below the 5 rem limit for accidents set forth in 10 CFR 72.106(b) and in the U.S. Environmental Protection Agency's protective action guidelines.

Radiological decommissioning of the ISFSI would be complete when the last dry shielded canister is removed from the site. Small occupational exposures to workers could occur during decontamination activities, but these exposures would be much less than those associated with cask loading and transfer operations. Due to the containment design of the sealed surface storage casks, no residual contamination is expected to be left behind on the horizontal storage module and concrete base pad. The horizontal storage modules, base pad, fence, and peripheral utility structures are defacto decommissioned when the last cask is removed.

Alternatives to the Proposed Action: The applicant's Environmental Report and the staff's EA discuss several alternatives to the proposed ISFSI license renewal. These alternatives include shipment of spent fuel to a permanent Federal Repository, ship the spent fuel off-site, construct a new spent fuel storage pool at the site, and construct another on-site ISFSI, as well as the no action alternative. In the first category, the alternatives of shipping spent fuel from HBRSEP to a permanent Federal Repository or to another spent fuel storage facility were determined to be non-viable alternatives, as no such facilities are currently licensed in the United States, and shipping the spent fuel to other power stations is not common practice

because the receiving utility would have to be licensed to store the HBRSEP spent fuel, and it is unlikely that another utility would be willing to accept it, in light of their own limitations on spent fuel storage capacity. Other alternatives include the construction of additional on-site storage capabilities. These options were considered less favorable because of the increased costs involved and the additional worker exposures from transfer of the spent fuel.

Renewal of the HBRSEP ISFSI license for a term of 20 years would result in the ISFSI license expiring 4 years prior to expiration of the proposed HBRSEP operating license. Based on the expected limits on the amounts of fuel that can be shipped annually to a potential Federal Repository and the anticipated opening of such a facility, PEC estimates it would not be able to ship all the spent fuel before expiration of the HBRSEP ISFSI license. As a result, a third renewal of the HBRSEP ISFSI license would be required, thereby adding cost.

The no action alternative could result in the expiration of the HBRSEP ISFSI license. The fuel currently stored would then have to be removed. Storage capacity limitations would require PEC to ship fuel to an available offsite storage facility. Transfer of fuel from the existing HBRSEP ISFSI to another facility would increase worker exposure. Following removal of the fuel the HBRSEP ISFSI would be decommissioned. Since the HBRSEP ISFSI would eventually be decommissioned, the impacts of the “no action” alternative are considered similar to the other alternatives.

As discussed in the EA, the Commission has concluded that there are no significant environmental impacts associated with renewing the license of the HBRSEP ISFSI, and other alternatives were not pursued because of significantly higher costs, additional occupational exposures, and the unavailability of offsite storage options.

Agencies and Persons Contacted: Officials from the U.S. Fish and Wildlife Service, the South Carolina State Historic Preservation Office, and the South Carolina Department of Natural Resources were contacted in preparing the staff’s environmental assessment. The conclusions by all agencies consulted were consistent with the staff’s conclusions.

II. FINDING OF NO SIGNIFICANT IMPACT

The staff has reviewed the environmental impacts of renewing the HBRSEP ISFSI license relative to the requirements set forth in 10 CFR Part 51, and has prepared an

Environmental Assessment. Based on the Environmental Assessment, the staff concludes that there are no significant radiological or non-radiological impacts associated with the proposed action and that issuance of renewal of the license for the interim storage of spent nuclear fuel at the HBRSEP ISFSI will have no significant impact on the quality of the human environment. Therefore, pursuant to 10 CFR 51.31 and 51.32, a finding of no significant impact is appropriate and an environmental impact statement need not be prepared for the renewal of the materials license for the HBRSEP ISFSI.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," final NRC records and documents regarding this proposed action, including the application for license renewal dated February 27, 2004, and supporting documentation, and the staff's EA, dated March 2005, are publically available in the records component of NRC's Agencywide Documents Access and Management System (ADAMS). These documents may be inspected at NRC's Public Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html> under Accession No. ML040690774 and **ML050700137**. These documents may also be viewed electronically on the public computers located at the NRC's Public Document Room (PDR), O1F21, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852. The PDR reproduction contractor will copy documents for a fee. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS, should contact the NRC PDR

Reference staff by telephone at 1-800-397-4209 or (301) 415-4737, or by e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 10th day of March 2005.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

Christopher M. Regan, Senior Project Manager
Spent Fuel Project Office
Office of Nuclear Material Safety
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