



**BNFL**  
Inc.

Big Rock Point Restoration Project  
Major Component Removal

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Mr. William E. Brach

Your ref: N/A

Director, Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Our ref: BRP-2001-06-213

WBS: 1.3.08

June 19, 2001

**Subject: Big Rock Point Restoration Project - 5339 – 10CFR71 Certificate of Compliance Application for the One-Time Shipment of the Big Rock Point Reactor Vessel Package Docket No. 71-9300**

Dear Mr. Brach:

BNFL Inc. requests that the Nuclear Regulatory Commission (NRC) issue a Certificate of Compliance (CoC) for the one-time shipment of the Big Rock Point (BRP) Reactor Vessel (RV) as a Type B, exclusive use, radioactive material transportation package. Seven uncontrolled copies and Appendices of the *Big Rock Point Reactor Vessel Package Safety Analysis Report* (BRP RVP SAR-5339) are enclosed and provide the bases for BNFL Inc.'s application for a CoC pursuant to Subpart D of 10 CFR 71. BNFL Inc. respectfully requests approval of this application. The timely removal, packaging and shipment of the RV is a critical-path decommissioning activity necessary for the successful return of the BRP Site to a green field site. Our schedule constraints are driven by the need to deliver the RV Package to Barnwell, SC in the fall of 2002. To that end, your timely review and approval of this application is greatly appreciated.

The RV Package presented in this application complies with the requirements of 10 CFR 71, including the criteria for Normal Conditions of Transport (10 CFR 71.71) and Hypothetical Accident Conditions (10 CFR 71.73). The design, future procurement, fabrication, assembly, testing and operating conditions of the RV Package have been and/or will be conducted under BNFL Inc.'s NRC approved QA Program (Docket Number 71-0912). No exemptions from 10 CFR 71 requirements are being requested.

*NYSSOI Power*

The RV Package is composed of a three-inch thick cylindrical shell welded to four-inch thick top and bottom plates. The overall outer dimensions of the RV Package are approximately 13 feet in diameter and 25 feet long. It will contain the RV, remaining reactor internals, and Low Density Cellular Concrete (LDCC) filling the void spaces inside the RV and between the RV and the cylindrical shell. The maximum total weight of the loaded RV Package is approximately 565,000 pounds, excluding the tie-down system.

The radioactive content of the RV Package is Normal Form radioactive material comprised of the RV, remaining portions of the stainless steel mirror insulation, and selected, fixed RV internals. These components are described in detail in the SAR.

Development of the radioactive source term is also presented in the SAR. This includes radionuclide values for both internal surface contamination and neutron-activated material. The radionuclide values are decay-corrected to September 2002. Based on measured dose rates, isotopic analyses of samples, and conservative calculations, the total radioactivity in the RV Package will be less than 13,100 curies by September 1, 2002. There is less than 0.05 gram of fissile material and less than 0.05 curies of plutonium. There are no gaseous radionuclides (i.e., Xe and Kr), no liquid radioactivity, and the entire radioactive inventory is immobile and fixed in place by the LDCC. The final loaded package configuration consists of a single, solid, integrated unit consisting of steel and LDCC.

A brittle fracture evaluation is also provided in the SAR. As a result of material selection for the fabrication of the top plate of the RV Package, the lowest ambient temperature permissible during RV Package transport is zero degrees Fahrenheit. This operating constraint will be imposed on the transportation of the package.

Should you have any questions or comments, please do not hesitate to contact me at 231-547-8228, or Mick Papp at 231-547-8384.

Sincerely,



Patrick T. Daly, MCR Project Manager  
BNFL Inc.

c: Ms. N. L. Osgood, USNRC, NMSS - Rockville

Attachments