

71-9300



BNFL Inc.
Big Rock Point Restoration Project
Major Component Removal
10269 US 31 North
Charlevoix, MI 49720-9436

Mr. E. William Brach
Director Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Your Ref: Docket No. 71-9300

Our Ref: BRP-2003-09-140
WBS# 1.3.08

September 15, 2003

**Subject: Big Rock Point Restoration Project - 5339 – Certificate of Compliance (CoC) for
Radioactive Material Package Certificate Number 9300, Docket No. 71-9300, TAC No.
L23336**

Dear Mr. Brach:

By letter dated April 8, 2002, your Office transmitted to BNFL Inc. the subject Certificate. The Certificate was issued on the basis of the Big Rock Point Reactor Vessel Package Safety Analysis Report (BRP RVP SAR-5339). Since the time of issuance of the CoC, additional consideration has been given to assure that no voids are left within the package following injection of the Low Density Cellular Concrete (LDCC). This consideration has resulted in a revision to the LDCC injection sequence identified in Chapter 7 of the Safety Analysis Report. A revised page identifying that change is enclosed for your consideration in issuing an amendment to the CoC.

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,

A handwritten signature in black ink, appearing to read "P. T. Daly", with a long, sweeping horizontal line extending to the right.

Mr. P. T. Daly,
BNFL Inc. Project Manager
MRC Contract
Big Rock Point

14ms501

cc:

Mr. Shawn Williams, USNRC, NMSS/SFPO - Rockville

M. Papp, BNFL Inc. - BRP

J. Vorees, BNFL Inc. - Oak Ridge

K. Hass, CEC Co - BRP

G. Withrow, CEC Co - BRP

J. Christian, BNFL Inc. - Crystal City

J. Bolon, BNFL Inc. - Oak Ridge

C. Smith, BNFL Inc. - Denver

Attachment

BRP RVP SAR-5339 UPDATE INSTRUCTIONS
REVISION 3, SEPTEMBER 15, 2003

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**Big Rock Point
Reactor Vessel Package
Safety Analysis Report**

Revision 3

September 15, 2003

Report Number BRP RVP SAR-5339

Docket Number: 71-9300

Prepared and Revised by:

Sargent & Lundy

For:

**BNFL Inc.
10269 US 31 North
Charlevoix, MI 49720-9436**



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John Vorees, BNFL Inc.
Licensing Manager

Date



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After the RV has been loaded into the package, the top plate will be welded to the package and the lifting lug will be removed. At this time, Low Density Cellular Concrete (LDCC) will be injected into the RV through the holes in the top plate which were previously used for the lifting lug attachment. The void space inside the RV will be filled with LDCC. The design characteristic of the LDCC critical for this application is its density. A density range of 30-36 lb/ft³ has been considered for the LDCC in the RV in the design of the package.

To ensure that no voids are left within the RV, the LDCC density range is achieved, and no water remains in the LDCC, a controlled LDCC injection process will be followed. The LDCC injection process will be accomplished using written procedures approved under BNFL Inc.'s QA Program. The process of LDCC injection including confirmatory tests performed for demonstration of compliance with the requirements will be documented.

The donut region of the package may be injected while the package is in the vertical position. After the LDCC has cured, the lifting lug will then be refitted on the top plate. The package will then be down-ended into a horizontal position using the Reactor Building 125 ton capacity crane, the lifting lug, the trunnions, and the A-frame pivot device.

Once the package loaded with the RV is in a horizontal position, the lifting lug will be removed for the last time, and the penetration holes on the top plate will be plugged and seal welded. The pressure and leak tests described in Sections 8.1.3 and 8.1.4 will be conducted after this step.

Following successful completion of these tests, LDCC injection of the annulus will continue while the loaded package is still in a horizontal position. The penetration holes in the body of the package will be used to fill the annulus between the RV and the package with 50-60 lb/ft³ LDCC. Once the annulus has been filled and the LDCC has cured, these holes will also be plugged and seal welded.

The foregoing operations will be performed in accordance with written procedures approved under BNFL Inc.'s QA Program.

7.1.2.1 Lifting Devices

The package lifting devices include a lifting lug assembly and two trunnion assemblies. The lifting lug and the package top plate will be used to lift the RV from the cavity. The lifting lug and the trunnions will be used for the package up-ending and down-ending operations discussed in Section 7.1.2. The lifting lug and trunnions are not structural parts of the package and will be removed prior to shipment.

There are no other structural parts of the package that could be used for lifting the package during transport. Therefore, the 10 CFR 71.45(a) requirement regarding inoperability of these devices during transport is satisfied.

As stated in Section 2.5, since these devices are not structural parts of the package, their design is not part of the package safety analysis for Part 71 considerations. These devices, however, are