

March 31, 2005

10 CFR 72.48(d)(2)

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001

**DOCKETS 50-155 AND 72-043 – LICENSE DPR-6 – BIG ROCK POINT PLANT –  
BI-ANNUAL REPORT, CHANGES, TESTS, AND EXPERIMENTS PURSUANT TO  
10 CFR 72.48**

In accordance with 10 CFR 72.48(d)(2), as a general licensee under the provisions of Certificate of Compliance (CoC) 72-1026, this report serves to describe and summarize evaluation of changes, tests, and experiments affecting the FuelSolutions™ Storage System Safety Analysis Reports for the period of April 1, 2003 to April 1, 2005.

Attachment 1 contains a short description and summary of the Big Rock Point 10 CFR 72.48 evaluation affecting the WSNF-220 FuelSolutions™ Storage System Final Safety Analysis Report (FSAR), as updated, for the W150 Storage Cask and W100 Transfer Cask.

No Big Rock Point 10 CFR 72.48 evaluations affecting the WSNF-223 FuelSolutions™ Storage System FSAR, as updated, for the Wesflex W74 canister were performed in the period.

In all cases, no prior NRC approval for the changes, test, or experiment was required. As a general licensee, Big Rock Point did not request the 72-1026 Certificate holder to obtain a license amendment, nor did the Certificate holder obtain any license amendments. The changes, tests, or experiments did not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the FSARs (as updated),
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a system, structure, or component (SSC) important to safety previously evaluated in the FSARs (as updated),
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the FSARs (as updated),
4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the FSARs (as updated),
5. Create a possibility for an accident of a different type than previously evaluated in the FSARs (as updated),
6. Create a possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the FSARs (as updated),
7. Result in a design basis limit for a fission product barrier as described in the SARs (as updated) being exceeded or altered, or

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8. Result in a departure from a method of evaluation described in the FSARs (as updated) used in establishing the design bases or in the safety analyses.

Copies of the 10 CFR 72.48 evaluation are contained in our site Administrative Volume 30, Dry Fuel Storage Exceptions Document. The evaluations contained in Volume 30 are used in subsequent 10 CFR 72.48 evaluations and from our site-specific exceptions to the BNFL FSARs.

If you have any questions, please contact Licensing Supervisor, Linda Castiglione, at 231-547-8365.



Kurt M. Haas  
Site General Manager

cc: Regional Administrator, U.S. NRC, Region III  
Project Manager, U.S. NRC, NMSS  
Steve Sisley, BNFL FuelSolutions™ Licensing/Regulatory Compliance Manager  
Attachment

Attachment 1

Consumers Energy Company  
Big Rock Point  
Dockets 50-155 and 72-043

**10 CFR 72.48 Evaluations  
WSNF-220 FuelSolutions™ Storage System Final Safety Analysis Report  
W150 Storage Cask and W100 Transfer Cask**

2 Pages

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**10 CFR 72.48 Evaluations  
WSNF-223 FuelSolutions™ Storage System Final Safety Analysis Report  
Wesflex W74 Canister**

Big Rock Point Quality Review Form Log Number: 284-04

**Informational BNFL Fuel Solutions™ Condition Report and 10CFR72.48 Evaluation on W100 Transfer Cask Coating (reference letter from BNFL to Kurt Haas dated September 9, 2004)**

**DESCRIPTION:**

Revised Volume 30, Dry Fuel Storage Exceptions Document (DFSED) to include notification from Certificate Holder, concerning adverse conditions affecting Structures, Systems, or Components (SSC's) purchased by Big Rock Point for Dry Fuel Storage. The addition of vendor-supplied evaluations (and site-specific evaluations) of dry fuel storage SSC's "exceptions" or other informational issues is appropriate as a location for future reference and retrievability of information.

The revision included a reference to the BNFL FuelSolutions™ letter to Kurt Haas dated September 9, 2004. This letter informed Big Rock Point of a minor discrepancy in the type of coating used on the W100 Transfer Cask neutron shield as a result of a BNFL FuelSolutions™ Condition Report (#04-022Q). The revised coating type did not alter the purpose of this coating. However, some changes resulted to the SAR section on the thermal analysis due to a revision in the thermal limitations of the coating type (SAR reported maximum allowable service temperature of 350°F as opposed to a Vendor specification of 250°F.)

**SUMMARY:**

Reference FuelSolutions™ Storage System FSAR (WSNF-220), Revision 1, April 2003. Section 4.1.2, Design Basis Ambient Conditions lists a temperature range of -40°F to 125°F. The rating of the revised coating of 250°F bounds those values. Coating absorptivity values were not reported as revised by BNFL in their September 9, 2004 letter. This value was assumed to have remained the same, as it was an empirical number, chosen from an outside reference.

During fire events, the coating is not expected to survive and conservative emissivity value was assumed in the analysis.

Editorial revision to the DFSED and inclusion of this reference does not degrade the analysis in the FSAR. (WSNF-220). The condition report evaluated the revised coating type. Although the SAR is in error, the revision to update the temperature to the Manufacture's Specification for in-service heat loads does not increase the frequency of occurrence of thermal accidents.

The W100 Transfer cask is affected by this activity. The indirect affect is to slightly alter statements in the BNFL FuelSolutions™ FSAR in the description of thermal analyses. The change in likelihood of failure due to analyzed thermal events is negligible, as the FSAR revisions are editorial (coating temperature specification has no affect on thermal analysis.)

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**WSNF-223 FuelSolutions™ Storage System Final Safety Analysis Report**  
**Wesflex W74 Canister**

The consequences from dose resulting from the thermal accidents evaluated in the SARs are minimally affected. Thermal accidents evaluated in the FSAR, Chapter 4, for the W100 Transfer Cask. Although the maximum n-shield jacket temperature reported in the FSAR (WSNF-200) is 260°F (Table 4.5-6 – Transfer Cask Maximum Material Temperatures for Off-Normal Conditions) this increase of 10°F, above the Vendor Specified value of 250°F is considered a minimal increase (<4%.) Since little or no credit is taken for n-shield coating in the thermal analysis (non for the fire-accident), and conservative assumptions were taken for emissivity values, the thermal analysis remains valid.

The intent of the revision to correct erroneous maximum allowable coating temperatures results on no increase in the consequences of analyzed thermal accidents due to this proposed change.

Existing SAR-evaluated accidents bound the type of thermal accidents as a result of revision of coating temperature specifications.

Malfunctions of W100 Transfer Cask coating have been evaluated and are bounded by current thermal analyses in the SAR. Type of malfunction remains the same, since only the temperature specification is revised. The initiators (fire and extreme off-normal temperatures) are explicitly described in the SAR and are not revised by this specification change. A new failure mechanism is not introduced by this revision.

Type of failure (breach due to temperature affect) and results of failure modes (loss of containment and radiological release) due to this temperature revision is bounded by or minimally affects accidents previously evaluated in the SAR.

The fission barrier design basis limits (failure due to temperature affects) have not been exceeded or altered. Editorial changes to the SAR and revised temperature specification for W100 Transfer Cask coating results in a predicted response to thermal accidents that has not changed. The design basis thermal accident with revised coating temperature specifications is essentially the same as current SAR thermal analyses.

Changes to input for coating limiting temperature in the thermal analysis methods for the W100 Transfer Cask that yield results that are essentially the same over entire range of use. Changes do not affect the BNL WSNF-200 SAR method and is not a departure from that approved method.