Entergy

**Entergy Nuclear Operations, Inc.**
**Palisades Nuclear Plant**
27780 Blue Star Memorial Highway
Covert, MI 49043

February 27, 2008

10 CFR 72.44(d)(3)

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

Big Rock Point
Dockets 50-155 and 72-043
License No. DPR-6

2007 Annual Radioactive Effluent Release Report – Big Rock Point

Dear Sir or Madam:

In accordance with 10 CFR 72.44(d)(3), Entergy Nuclear Operations, Inc. is submitting the annual radioactive effluent release report for Big Rock Point for the period from January 1, 2007, through December 31, 2007.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

Christopher J. Schwarz
Site Vice President
Palisades Nuclear Plant

Enclosure (1)

CC Administrator, Region III, USNRC
BRP Decommissioning Inspector, USNRC
NMSS Project Manager, USNRC

ENCLOSURE

# INDEPENDENT SPENT FUEL STORAGE INSTALLATION ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT BIG ROCK POINT January 1 through December 31, 2007

## I. FACILITY DESCRIPTION

The Independent Spent Fuel Storage Installation (ISFSI) is located within the owner-controlled area of the Big Rock Point (BRP) site. The storage of spent fuel at BRP meets the requirements of 10 CFR 72, and the Certificate of Compliance No. 72-1026, issued by the Nuclear Regulatory Commission (NRC).

## II. EFFLUENT LIMITS AND CONTROLS

The ISFSI operates under effluent control limits as required by 10 CFR 72.104. However, the design of the sealed storage canisters at the ISFSI precludes any gaseous or liquid effluent releases.

## III. RADIOLOGICAL EFFLUENT RELEASES

As noted in Section II, by design, there are no radioactive liquid or gaseous effluents originating from the ISFSI facility. The annual radiological surveillance performed during this reporting period did not indicate any release of radioactivity from the ISFSI.

## IV. ISFSI ENVIRONMENTAL MONITORING PROGRAM

The BRP Radiological Environmental Monitoring Program (REMP) is described in the Offsite Dose Calculation Manual (ODCM), Section I, Subsection 4.0. The ISFSI Environmental Monitoring Program, which is contained within the BRP REMP, consists of thermoluminescent dosimeters (TLDs) at four locations along the perimeter of the ISFSI site, and three control TLDs 10.5 to 50 miles from the site. Annual TLDs are read annually and quarterly TLDs are read quarterly as reflected in Table 1. Annual and quarterly measurements are compared to control measurements to evaluate compliance with 10 CFR 72.104. The results for the ISFSI TLDs and the average of the control TLDs measured in 2007 are summarized in the following table.

There were no sample anomalies for 2007.

## V. ISFSI ENVIRONMENTAL MEASUREMENTS

BRP ISFSI Environmental TLD Results (mR)
January 1, 2007 – December 31, 2007

| TLD No./Location | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Annual |
|---|---|---|---|---|---|
| BRP-18 / 137 meters NW of ISFSI | 10.4 ± 1.0 | 14.3 ± 1.5 | 10.1 ± 1.1 | 12.3 ± 0.6 | 47.9 ± 1.3 |
| BRP-19 / 137 meters SW of ISFSI | 12.6 ± 0.6 | 16.9 ± 1.5 | 13.5 ± 1.1 | 12.6 ± 0.5 | 59.3 ± 2.9 |
| BRP-20 / 137 meters SE of ISFSI | 13.4 ± 0.6 | 16.4 ± 1.5 | 14.8 ± 1.2 | 20.0 ± 1.2 | 61.2 ± 1.2 |
| BRP-21 / 137 meters NE of ISFSI | 10.4 ± 0.6 | 14.3 ± 1.4 | 10.5 ± 1.1 | 40.4 ± 1.5 | 45.2 ± 2.6 |
| Summary of Control Locations | 16.1 ± 2.3 | 19.8 ± 5.0 | 15.3 ± 4.0 | 20.1 ± 2.8 | 73.3 ± 7.1 |

## VI. CONCLUSIONS

Based on the above measurements performed during the reporting period, it is concluded that the dose from ISFSI operations does not exceed the limits as defined in 10 CFR 72.104.