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PNP 2012-018

10 CFR 72.44

February 22, 2012

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

SUBJECT: 2011 ISFSI Annual Radioactive Effluent Release Report

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

Dear Sir or Madam:

In accordance with 10 CFR 72.44(d)(3), Entergy Nuclear Operations, Inc. is submitting the annual independent spent fuel storage installation (ISFSI) radioactive effluent release report for Big Rock Point for the period from January 2011, through December 2011.

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

Sincerely,

A handwritten signature in black ink, appearing to read "OWG", with a stylized flourish extending to the right.

owg/bed

Attachment: Independent Spent Fuel Storage Installation Annual Radioactive Effluent Release Report

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

## ATTACHMENT

### INDEPENDENT SPENT FUEL STORAGE INSTALLATION ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

**BIG ROCK POINT**  
**January 2011 – December 2011**

#### 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 12.6 miles from the site. Quarterly TLDs are read quarterly, as reflected in Section VI. 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 2010 are summarized in Section VI.

#### V. SAMPLE ANOMALIES

None.

VI. ISFSI ENVIRONMENTAL MEASUREMENTS

BRP ISFSI Environmental TLD Results (mR)  
January 2011 – December 2011

| <b>TLD No./Location</b>              | <b>1<sup>st</sup> Quarter</b> | <b>2<sup>nd</sup> Quarter</b> | <b>3<sup>rd</sup> Quarter</b> | <b>4<sup>th</sup> Quarter</b> |
|--------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| BRP-18 / 137 meters NW of ISFSI      | 14                            | 17                            | 15                            | 17                            |
| BRP-19 / 137 meters SW of ISFSI      | 17                            | 19                            | 19                            | 20                            |
| BRP-20 / 137 meters SE of ISFSI      | 18                            | 21                            | 20                            | 20                            |
| BRP-21 / 137 meters NE of ISFSI      | 15                            | 16                            | 15                            | 16                            |
| Control Location – Petoskey BRP-05   | 16                            | 17                            | 19                            | 18                            |
| Control Location – Boyne City BRP-06 | 16                            | 18                            | 19                            | 18                            |
| Control Location – Ironton BRP-07    | 16                            | 19                            | 17                            | 18                            |

VII. CONCLUSIONS

When compared to the control locations, it is evident that the dose from ISFSI operations during the reporting period does not exceed the limits as defined in 10 CFR 72.104.