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Date: June 23, 2010

**PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE - PNO-I-10-003**

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region I staff on this date.

**Facility**

Entergy Nuclear Operations, Inc.  
Vermont Yankee Nuclear Power Station  
Unit 1  
Brattleboro, VT  
Docket No.: 50-271  
License No.: DPR-28

**Licensee Emergency Classification**

Notification of Unusual Event  
 Alert  
 Site Area Emergency  
 General Emergency  
 Not Applicable

American Electric Power  
D.C. Cook Nuclear Power Plant  
Unit 1 & 2  
Bridgman, MI  
Docket No.: 50-315; 50-316  
License No.: DPR - 58; DPR - 74

**SUBJECT: UNUSUAL EVENT DECLARATIONS DUE TO SEISMIC ACTIVITY**

On June 23, 2010, the Vermont Yankee Nuclear Power Station (Vermont Yankee) located in Vernon, VT, declared an Unusual Event (UE) at 2:25 p.m. The declaration was made by Entergy in accordance with the plant specific emergency action guidelines after ground motion was felt by personnel on-site and the occurrence of an earthquake was confirmed by the National Earthquake Information Center. According to U.S. Geological Survey, an earthquake of magnitude 5.0 occurred with a seismic epicenter located 33 miles north of Gatineau, Quebec, Canada, near Ottawa and approximately 300 miles from the Vermont Yankee site.

Additionally, the D.C. Cook Nuclear Power Plant (D.C. Cook) located in Bridgman, MI, declared an UE at 2:28 p.m. The declaration was made by the licensee in accordance with the plant specific emergency action guidelines after ground motion was felt and reported by on-site staff to control room operators.

Vermont Yankee continues to operate normally at 100-percent power and there has been no evidence of damage based upon plant inspection of station equipment and structures. The NRC Resident Inspectors are on-site and independently verifying, by conducting inspection activities, that there is no evidence of damage to plant equipment. The NRC confirmed that VY operators notified the states of NH, VT, and MA regarding the UE emergency declaration.

D.C. Cook continues to operate normally at 100-percent power and there has been no damage based upon inspection of station equipment. The NRC Resident Inspectors are on-site providing independent review of the licensee's response and inspection of plant equipment. The NRC confirmed that D. C. Cook operators notified the State of MI regarding the UE emergency declaration.

The NRC is monitoring the impact of the seismic activity on other U.S. plants. Currently, no other plants have made an emergency declaration in accordance with their emergency action guidelines.

An Unusual Event is the lowest of four emergency classifications of events that apply to nuclear power plants as defined by the NRC. The NRC has not changed response posture due to this event.

The information presented herein has been discussed with Entergy and AEP and is current as of June 23, at 4:30 p.m. This preliminary notification is issued for information only.

NRC Public Affairs is prepared to respond to media inquiries.

ADAMS Accession Number: ML101740638

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**SUNSI Review Complete:**           MXG           **(Reviewer's Initials)**

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