



November 17, 2011

10 CFR 21.21

Docket No. 50-443

SBK-L-11232

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

Seabrook Station

10 CFR Part 21 Notification

General Electric CR-120B Relays (120 VAC)

Pursuant to 10CFR21.21(d)(3)(ii), NextEra Energy Seabrook LLC, is providing written notification of the identification of a defect. This information was initially reported to the NRC Operations Center on November 1, 2011 (Event Number 47395).

The attachment to this letter provides the information required by 10 CFR 21.21(d)(4). In addition, the attachment discusses the relevance of this issue to Seabrook Station.

No commitments to the NRC are contained in this submittal.

If you have any questions regarding this submittal, please contact Mr. Michael O'Keefe, Licensing Manager, at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC

A handwritten signature in black ink, appearing to read "Paul O. Freeman".

Paul O. Freeman  
Site Vice President

IE19  
NRC

U.S. Nuclear Regulatory Commission

SBK-L-11232

Page 2

cc: NRC Region I Administrator  
G. E. Miller, NRC Project Manager  
W. J. Raymond, NRC Resident Inspector

Attachment

**Attachment**

**10 CFR Part 21 Notification**

**General Electric CR-120B Relays (120 VAC)**

## 10 CFR Part 21 Notification

### General Electric CR-120B Relays

This notification follows the format of and addresses the considerations contained in 10 CFR 21.21(d)(4)(i)-(viii).

- (i) Name and address of the individual or individuals informing the Commission:

**Paul O. Freeman  
Site Vice President  
NextEra Energy Seabrook, LLC  
P.O. Box 300  
626 Lafayette Road  
Seabrook, NH 03874**

- (ii) Identification of the facility, the activity, or the basic component supplied for facility or such activity within the United States which fails to comply or contains a defect:

**Facility:**

**Seabrook Station  
626 Lafayette Road  
Seabrook, NH 03874**

**Basic component which fails to comply or contains a defect:**

**General Electric CR-120B Relays (120 VAC)**

- (iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect:

**The relay was manufactured by General Electric Company (GE) and supplied by National Technical Systems Inc. (NTS).**

- (iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply:

**On September 2, 2011, it was reported that a 120 VAC General Electric (GE) CR-120B relay failed to reset after 15 cycles during bench testing at Seabrook Station. Five additional relays supplied under the same purchase order have also failed during bench tests. An analysis of the failure of a GE CR-120B relay in the Seabrook Emergency Diesel Generator (EDG) Air Handling System (DAH) system determined that, if the relays were**

**installed, the condition could create a substantial safety hazard due to a subsequent loss of the emergency power function.**

- (v) The date on which the information of such defect or failure to comply was obtained:

**On October 31, 2011, an evaluation of the failed relays was completed and the initial report was made to the NRC Operations Center on November 1, 2011 (Event Number 47395).**

- (vi) In the case of the a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part:

**Safety-related GE CR-120B relays were provided to NextEra for Seabrook Station which later failed bench testing. An evaluation performed to determine the applications where these relays could have been and were installed concluded that there is one safety significant application relative to the failure of the GE CR-120B relays to reset in the Seabrook Emergency Diesel Generator (EDG) Air Handling System (DAH). Each DAH system train (includes one supply fan and one exhaust fan per train) has one relay that provides a start permissive for the ventilation fans. A physical inspection of the DAH system identified that a CR-120B relay was not installed in that location.**

- (vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action:

**An evaluation of a similar failure on a non-safety relay was completed under contract by Exelon PowerLabs. The results of this evaluation identified the possible cause to be residual magnetism after being de-energized.**

**NTS is now evaluating the suspect CR-120B relays to determine the cause of the failure. NTS is the safety-related supplier of the relays. The NTS analysis is scheduled to be completed in early December with a final report due by the end of December.**

- (viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees:

**None.**