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10CFR 2.201  
10CFR50, Appendix B,  
Criterion XVI

April 14, 2004  
2130-04-20086

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Oyster Creek Generating Station  
Facility Operating License No. DPR-16  
NRC Docket No. 50-219

Subject: Reply to a Notice of Violation; EA-04-033

Reference:(1) Licensee Event Report 2003-002-00: Completion of Reactor Shutdown Required  
by Tech Specs due to Cable Fault, July 17, 2003 (2130-03-20173)

By letter dated March 15, 2004, the NRC docketed a Final Significance Determination for a  
White Finding and Notice of Violation (NRC Inspection Report 05000219/2003005) for the  
Oyster Creek Generating Station. Attachment 1 to this cover letter provides the requisite reply to  
the Notice of Violation. Attachment 2 lists the regulatory commitments made in this reply.

If any further information or assistance is needed, please contact David Fawcett at 609-971-  
4284.

Sincerely,



C. N. Swenson  
Vice President, Oyster Creek Generating Station

CNS/DIF

Attachment 1 – Reply to the Notice of Violation  
Attachment 2 – List of Regulatory Commitments

cc: H. J. Miller, Administrator, USNRC Region I  
P. S. Tam, USNRC Senior Project Manager, Oyster Creek  
R. J. Summers, USNRC Senior Resident Inspector, Oyster Creek  
File No. 04030

IE14

## ATTACHMENT 1

AmerGen Energy Company, LLC  
Oyster Creek Generating Station

Docket No. 50-219  
License No. DPR-16

### Restatement of Violation EA-04-033

During an NRC inspection conducted between September 29, 2003 – December 31, 2003, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violation is listed below:

10 CFR 50, Appendix B, Criterion XVI states, in part, that measures shall be established to assure that conditions adverse to quality, such as deficiencies, are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

Contrary to the above, following ground faults of an Anaconda power cable to the 1B2 480V unit substation in November 2001, and an Anaconda power cable from the #2 emergency diesel generator output breaker to the 1D 4kV emergency bus in October 1996, both of which were caused by water intrusion and cable insulation breakdown, AmerGen did not identify and take prompt and appropriate corrective actions to preclude repetition. Subsequently, on May 20, 2003, with the plant operating at 100% power, a ground fault occurred in an Anaconda power cable from the #1 emergency diesel generator output breaker, which was caused by water intrusion and cable insulation breakdown, and resulted in a loss of power to the 1C 4kV emergency bus and forced a plant shutdown.

This violation is associated with a WHITE significance determination process finding.

### AmerGen Reply to Notice of Violation EA-04-033

AmerGen concurs with the violation as written. This event is described in detail in LER 03-002, dated July 17, 2003.

#### **Reason for the Violation**

During NRC inspection conducted between September 29, 2003- December 31, 2003, a violation of NRC requirements was identified. The violation stated is with regard to non-compliance of 10CFR50, Appendix B, Criterion XVI, that requires conditions adverse to quality such as deficiencies be promptly identified and corrected.

AmerGen Energy had failed to identify a deficiency with respect to the cable type for the EDG-1 power feed. The cable failed in May 2003. In November 2001 a similar failure had occurred with respect to USS 1B2 cable. The root cause evaluation for 1B2 cable failure developed a decision process for the prioritized replacement of cables based on cable type, vintage, and installed environment.

Cables that were Anaconda, and were subjected to similar conditions, were provided a priority for replacement. The data that was used for determining 'cable type' for EDG-1, had incorrectly identified the EDG-1 cable as Cablec. Cablec is an improved version of Anaconda. Proper

identification of EDG-1 cable was missed. Had this cable been correctly identified as Anaconda, it would have received a higher priority for replacement.

### **Corrective Steps that Have Been Taken and the Results Achieved**

In May 2003 the root cause analysis of EDG-1 cable failure was initiated. The root cause evaluation determined that the failure resulted from non-uniform thickness of insulation shield (jacket) and moisture intrusion. This is the same failure mechanism previously experienced with medium voltage Anaconda cables of this manufacturing vintage buried in a wet environment.

Also, during the plant shut down in May 2003, walk downs were conducted to physically verify the following circuits; EDG #2, Feed water pump A, Recirc. Pump MG Set A, Recirc. MG Set C, USS 1A3, Circulating Water Pump A, and Circulating Water Pump C. From this walk down, the USS 1A3 cable was identified as Anaconda. Emergency Diesel Generator (EDG) -1 power feed cables were replaced with Okonite/Okoguard cables. Okonite/Okoguard is the Oyster Creek standard replacement cable for 4160V application. The cable is superior to the Anaconda cable because it does not have the manufacturing and construction issues that Anaconda cable had.

The new Okonite/Okoguard cables for EDG - 1 were tested at 35KV DC in accordance with plant procedures with satisfactory results before being put in service. The failed section of the cable was removed and sent to an independent testing lab for root cause analysis. EDG-1 was placed back in service.

Subsequent to the cable failure in 1996, the following safety-related cables have now been replaced:

- EDG #2 cable replaced in 1996 with Cablec
- USS 1A2 (Rx Bldg) rerouted to a dry path and replaced in 2002 with Okonite
- USS 1B2 (Rx Bldg) rerouted to a dry path and replaced in 2002 with Okonite
- EDG #1 cable replaced in May 2003 with Okonite

### **Corrective Steps that Were or Will Be Taken to Avoid Further Violations**

The EDG #1 cable replaced in May 2003 with Okonite.

The cable installed between EDG - 2 and bus 1D was physically verified not to be the same type that failed.

All buried medium voltage cable powering safety-related equipment was confirmed not to be the same type that failed.

The following known non-safety-related Anaconda cables buried in a wet environment will be replaced no later than the completion of outage 1R21 (Fall 2006), subject to possible re-prioritization based on evaluation of future test results:

- B Condensate Pump; replace in 2004
- B Feedwater Pump; replace in 2004
- C Condensate Pump; replace in 2006
- C Feedwater Pump; replace in 2006
- USS 1A3 (Intake Structure loads); replace in 2006.

As opportunities present themselves, we will continue to physically verify the manufacturer and type of installed non-safety-related medium voltage cables.

The current Oyster Creek cable test program consists of a periodic (6 year) 10 KV DC step voltage test of the 4160V cables. Oyster Creek is investigating a cable monitoring program using new technology to detect the stages of cable deterioration. This is an on-line and completely passive cable test program. Selected 4160V cable circuits are planned to be tested and results will be evaluated for prioritization of cable replacement.

**Date When Full Compliance Will Be Achieved**

Full compliance was achieved on May 27, 2003 when the faulted EDG-1 cables were replaced. The replacement cable was Okonite/Okoguard that is considered superior to the previously used Anaconda Unishield cable.

**ATTACHMENT 2**

**List of Regulatory Commitments**

The following table identifies those activities committed to by AmerGen Energy Company, LLC in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to David Fawcett at (609) 971-4284.

Regulatory Commitments	Due Date / Event
The five remaining non-safety-related Anaconda cables buried in a wet environment will be replaced no later than the completion of outage 1R21 (Fall 2006), earlier if plant conditions permit.	2006 / 1R21