

February 22, 2010  
EN 10-008

OFFICE OF ENFORCEMENT  
NOTIFICATION OF SIGNIFICANT ENFORCEMENT ACTION

Licensee: Exelon Generation Company, LLC EA-09-259  
Braidwood Nuclear Power Station, Unit 1  
Docket No. 50-456

Subject: ISSUANCE OF FINAL SIGNIFICANCE DETERMINATION AND NOTICE OF VIOLATION

This is to inform the Commission that a White Significance Determination Process (SDP) finding will be issued on or about February 25, 2010, to Exelon Generation Company, LLC, as a result of inspections at the Braidwood Nuclear Power Station. This White finding, an issue with low to moderate safety significance, which may require additional NRC inspections, involved the licensee's failure to design the Unit 1 Train B containment suction valve, 1SI8811B, and its associated electrical conduit in a manner that protected the safety-related function to open and provide the 1B emergency core cooling system (ECCS) train with a suction source from the containment sump for ECCS recirculation. This resulted in the failure of the valve to stroke full open during testing on June 24, 2009. Following the test failure, the licensee determined that water had entered the valve actuator through a flexible conduit penetration and caused corrosion of the torque switch and minor corrosion of the limit switch which prevented valve operation.

The SDP preliminarily characterized the finding as Yellow. A Regulatory Conference was held with the licensee on January 6, 2010, to discuss the risk significance of the finding. After reviewing the information developed during the inspection and the supplemental information provided by the licensee during the conference, the staff concluded that the inspection finding is appropriately characterized as White. Corrective actions are currently in place to prevent further leakage into this or other risk-significant motor-operated valves.

A Notice of Violation is included based on a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which requires, in part, that measures be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems, and components. Contrary to this requirement, the licensee failed to establish measures to ensure the selection and suitability of application of equipment essential to the safety-related function of the residual heat removal system. Specifically, the design of the 1SI8811B motor-operated valve actuator and associated conduit were not suitable to the application, because the design allowed water to enter the conduit and collect inside the actuator, which resulted in the June 24, 2009, failure.

It should be noted that the licensee has not been specifically informed of the enforcement action. The schedule of issuance and notification is:

Mailing of Final Significance Determination	February 25, 2010
Telephone Notification of Licensee	February 25, 2010

The State of Illinois will be notified.

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