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RS-07-088

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U. S. Nuclear Regulatory Commission
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Washington, D.C. 20555

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456 and STN 50-457

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Subject: Additional Information Supporting the 60-Day Response to Generic Letter 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations"

- References:
- (1) Letter from Mr. T. S. O'Neill (Exelon Generation Company, LLC) to U. S. NRC, "60-Day Response to Generic Letter 2006-03, 'Potentially Nonconforming Hemyc and MT Fire Barrier Configurations'," dated June 6, 2006
 - (2) Letter from U. S. NRC to Mr. C. M. Crane (Exelon Generation Company, LLC), "Braidwood Station, Units 1 and 2; Clinton Power Station, Unit No. 1; and Quad Cities Nuclear Power Station, Units 1 and 2 – Request for Additional Information Related to Generic Letter 2006-03, 'Potentially Nonconforming Hemyc and MT Fire Barrier Configurations' (TAC Nos. MD1550, MD1551, MD1564, MD1621, and MD1622)," dated May 2, 2007

In Reference 1, Exelon Generation Company, LLC (EGC) and AmerGen Energy Company, LLC (AmerGen) provided the 60-day written response to Generic Letter (GL) 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations." The GL requested information regarding the use of Hemyc and MT fire barrier materials and whether they are relied upon for separation and/or safe shutdown purposes. Additionally, the GL requested a description of the controls used to ensure other fire

barrier types were capable of providing the necessary level of protection.

In Reference 2, the NRC indicated that additional information was required to complete the review of the EGC and AmerGen response to GL 2006-03 for Braidwood Station Units 1 and 2, Clinton Power Station, Unit 1 and Quad Cities Nuclear Power Station, Units 1 and 2. Attachment 1 to this letter provides the requested information for Braidwood Station, Units 1 and 2 and Attachment 2 to this letter provides the requested information for Clinton Power Station, Unit 1.

Due to outage activities and limited resources, EGC determined that additional time is required to provide the requested information for Quad Cities Nuclear Power Station. As a result of discussions between EGC and the NRC on May 29, 2007, it was agreed that the requested information for Quad Cities Nuclear Power Station, Units 1 and 2, will be provided under a separate cover letter by June 12, 2007.

There are no regulatory commitments contained within this letter.

Should you have any questions concerning this letter, please contact Mr. David Gullott at (630) 657-2819.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 31st day of May 2007.

Respectfully,

A handwritten signature in black ink, reading "Darin M Benyak". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Darin M. Benyak
Director – Licensing and Regulatory Affairs
Exelon Generation Company, LLC
AmerGen Energy Company, LLC

- Attachments: 1. Braidwood Station, Units 1 and 2, Response to Request for Additional Information Related to Generic Letter 2006-03
2. Clinton Power Station, Unit 1, Response to Request for Additional Information Related to Generic Letter 2006-03

ATTACHMENT 1
Braidwood Station, Units 1 and 2
Response to Request for Additional Information Related to Generic Letter 2006-03

NRC Request

The Nuclear Regulatory Commission (NRC) staff reviewed Exelon Generation Company, LLC's response dated June 6, 2006, to Generic Letter (GL) 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations," dated April 10, 2006, and determined that additional information was needed to complete its review.

The current NRC guidance for raceway protection is contained in GL 86-10, "Implementation of Fire Barrier Requirements," Supplement 1. Please provide the following clarification to your June 6, 2006, GL 2006-03 response.

Were the as-installed 3M electrical raceway fire barrier system (ERFBS) for Braidwood Station, Units 1 and 2 tested and evaluated (for deviations from the testing) in accordance with the GL 86-10, Supplement 1 guidance?

Response

NRC Information Notice (IN) 95-52, "Fire Endurance Test Results for Electrical Raceway Fire Barrier Systems Constructed From 3M Company Interam Fire Barrier Materials," described fire tests performed with a standard ASTM E-119 fire exposure and acceptance criteria prescribed by Generic Letter (GL) 86-10, Supplement 1, "Fire Endurance Test Acceptance Criteria for Fire Barrier Systems Used to Separate Redundant Safe Shutdown Trains Within the Same Fire Area." Braidwood Station uses the 3M Interam fire barrier system in two locations (i.e., Unit 2 Cable Tunnel and Unit 2 Lower Cable Spreading Room) to separate safe shutdown trains in the same fire area. Based on the information and criteria provided in IN 95-52, an evaluation of these 3M Interam fire barrier systems was performed.

This evaluation concluded that the applicable 3M Interam fire barriers configurations are acceptable for the fire risk exposure prevalent in the Unit 2 Cable Tunnel and Unit 2 Lower Cable Spreading Room. The fire barrier systems in the Unit 2 Cable Tunnel and the Unit 2 Lower Cable Spreading Room, which are designed to have a one hour fire resistance rating, are considered to have at least a 49 minute fire rating when exposed to an ASTM E-119 fire test and following the acceptance criteria of GL 86-10, Supplement 1.

However, as evaluated, an equivalent ASTM E-119 fire is not credible in either the Unit 2 Cable Tunnel or the Unit 2 Lower Cable Spreading Room because of the limited quantity of fire-resistive fuel that is present (i.e., IEEE 383 qualified cable). Also, the fire loads normally present in these rooms are only capable of producing a fire duration of 30 minutes if an ASTM E-119 type fire was postulated to occur. The fire load in both rooms is dominated by fire-resistive cable (IEEE-383 qualified) in both trays and conduit, which presents a low risk of fire envelopment or spread. There are no components or equipment in either of these two rooms that could present a significant ignition source to the exposed cable or the wrap systems directly.

Therefore, the information provided in IN 95-52 and its Supplement were considered with respect to GL 86-10, Supplement 1 and the installed 3M fire wrap barriers at Braidwood Station were determined to be suitable for the fire hazards associated with

ATTACHMENT 1
Braidwood Station, Units 1 and 2
Response to Request for Additional Information Related to Generic Letter 2006-03

these areas. The evaluation documented above has demonstrated that the as-installed 3M electrical raceway fire barrier system for Braidwood Station, Units 1 and 2 was tested and evaluated in accordance with the GL 86-10, Supplement 1 guidance.

ATTACHMENT 2
Clinton Power Station, Unit 1
Response to Request for Additional Information Related to Generic Letter 2006-03

NRC Request

The Nuclear Regulatory Commission (NRC) staff reviewed Exelon Generation Company, LLC's response dated June 6, 2006, to Generic Letter (GL) 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations," dated April 10, 2006, and determined that additional information was needed to complete its review.

The current NRC guidance for raceway protection is contained in GL 86-10, "Implementation of Fire Barrier Requirements," Supplement 1. Please provide the following clarification to your June 6, 2006, GL 2006-03 response.

Were the as-installed 3M electrical raceway fire barrier system (ERFBS) for Clinton Power Station, Unit 1 tested and evaluated (for deviations from the testing) in accordance with the GL 86-10, Supplement 1 guidance?

Response

Clinton Power Station (CPS) Fire Area C-2 (i.e., Containment Building) contains a one-hour rated fire break in a Division 2 Class 1E cable tray above elevation 803'. Promatec Technologies, Inc tested this 3M Interam firebreak. Testing to National Fire Protection Association (NFPA) Standard 251 (ASTM E-119), meeting the requirements of Generic Letter (GL) 86-10, Supplement 1, "Fire Endurance Test Acceptance Criteria for Fire Barrier Systems Used to Separate Redundant Safe Shutdown Trains Within the Same Fire Area," was conducted.

Promatec Technologies, Inc., provided a Certificate of Compliance documenting the results of this testing for CPS. It was certified that the completed 3M Interam E-54C firebreak system, firebreak design, materials and installation, at CPS meets the requirements for a one-hour fire barrier, in accordance with 10 CFR 50 Appendix R, Section III.G.2.b, and a combustion free zone per the requirements of Supplement 1 to GL 86-10.

In summary, AmerGen Energy Company, LLC has confirmed that the 3M electrical raceway fire barrier system, as installed at CPS, was tested and evaluated in accordance with the GL 86-10, Supplement 1 guidance.