



Serial: RNP-RA/06-0040

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United States Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, Maryland 20852

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23

RESPONSE TO NRC GENERIC LETTER 2006-03, "POTENTIALLY
NONCONFORMING HEMYC AND MT FIRE BARRIER CONFIGURATIONS"

Ladies and Gentlemen:

On April 10, 2006, NRC Generic Letter 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations," was issued requesting that licensees provide a response within 60 days. Carolina Power and Light Company, also known as Progress Energy Carolinas, Inc. (PEC), is providing the response for H. B. Robinson Steam Electric Plant, Unit No. 2, in Attachment II to this letter.

Attachment I provides an Affirmation in accordance with the provisions of Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f).

If you have any questions concerning this matter, please contact Mr. C. T. Baucom at (843) 857-1253.

Sincerely,

A handwritten signature in cursive script that reads "Jan F. Lucas".

Jan F. Lucas

Manager – Support Services – Nuclear

BAN/ban

Attachments:

- I. Affirmation
- II. Response to NRC Generic Letter 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations"

c: Dr. W. D. Travers, NRC, Region II
Mr. C. P. Patel, NRC, NRR
NRC Resident Inspector

Progress Energy Carolinas, Inc.
Robinson Nuclear Plant
3581 West Entrance Road
Hartsville, SC 29550

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AFFIRMATION

The information contained in letter RNP-RA/06-0040 is true and correct to the best of my information, knowledge, and belief; and the sources of my information are officers, employees, contractors, and agents of Carolina Power and Light Company, also known as Progress Energy Carolinas, Inc. I declare under penalty of perjury that the foregoing is true and correct.

Executed On: 6/8/06



T. D. Walt

Vice President

H. B. Robinson Steam Electric Plant, Unit No. 2

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

**RESPONSE TO NRC GENERIC LETTER 2006-03,
“POTENTIALLY NONCONFORMING
HEMYC AND MT FIRE BARRIER CONFIGURATIONS”**

Background

On April 10, 2006, the NRC issued Generic Letter (GL) 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations." Responses to Generic Letter 2006-03 were required to be submitted within 60 days of the date of the letter. The following information is provided, as requested.

NRC Requested Information

All addressees are requested to provide the following information:

NRC Request 1(a)

Provide a statement on whether Hemyc or MT fire barrier material is used at their NPPs [Nuclear Power Plant] and whether it is relied upon for separation and/or safe shutdown purposes in accordance with the licensing basis, including whether Hemyc or MT is credited in other analyses (e.g., exemptions, license amendments, GL 86-10 analyses).

Response 1(a)

Hemyc fire barrier material is used at H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, as a one-hour Electrical Raceway Fire Barrier System (ERFBS) for conduits and is credited for separation of safe shutdown cables in a single fire area in accordance with the current licensing basis. This installation is relied upon in exemptions granted by the NRC dated October 25, 1984, and October 17, 1990.

HBRSEP, Unit No. 2, also uses MT fire barrier material on both sides of two (2) penetration seals. The MT wrap was applied over the surface of the penetrations to supplement the existing silicone foam seal design. The penetrations contain steam generator blowdown lines which are subject to movement as they heat up and cool down. These installations are relied upon in support of engineering evaluations of penetration seal designs in accordance with GL 86-10, "Implementation of Fire Protection Requirements," and are not used for protection of electrical raceway circuits. Therefore, additional information pertaining to MT fire barrier material will not be included in the responses to Questions 2 and 3.

NRC Request 1(b)

Provide a description of the controls that were used to ensure that other fire barrier types relied on for separation of redundant trains located in a single fire area are capable of providing the

necessary level of protection. Addressees may reference their responses to GL 92-08 to the extent that the responses address this specific issue.

Response 1(b)

Plant procedures OST-623, "Fire Barrier Penetration Seal Inspection (18 Month)," FP-013, "Fire Protection Systems Surveillance Requirements," and OST-648, "CCW Room One-Hour Rated Fire Barrier Wrap Inspection (18 Month)," require fire barrier installations to be inspected at an established frequency of 18 months to ensure the installations are intact. HBRSEP, Unit No. 2, utilizes engineering design controls implemented by procedures EGR-NGGC-0005, "Engineering Change," and EGR-NGGC-0102, "Safe Shutdown/Fire Protection Review," to ensure that fire barrier types specified for use in the plant for separation and safe shutdown purposes meet applicable design requirements. A review is normally performed by the HBRSEP, Unit No. 2, Fire Protection Engineer and Safe Shutdown Engineer, as necessary, during the engineering design change review and approval process.

NRC Request 2 Topic

For those addressees that have installed Hemyc or MT fire barrier materials, discuss the following in detail:

NRC Request 2(a)

The extent of the installation (e.g., linear feet of wrap, areas installed, systems protected).

Response 2(a)

HBRSEP, Unit No. 2, has approximately 120 linear feet of Hemyc installed in the Component Cooling Water (CCW) Pump Room. The Hemyc fire wrap is used to protect power cables to the "A" CCW Pump and the "C" CCW Pump. The Hemyc fire wrap is installed over two (2) 4-inch conduits for the "A" CCW Pump and over two (2) 3-inch conduits for the "C" CCW Pump. The "A" and "C" CCW Pumps are each part of the Component Cooling Water System. Power for the "A" CCW Pump comes from the Dedicated Shutdown System. Power for the "C" CCW Pump comes from the plant 480 VAC Electrical Distribution System Emergency Bus E-2.

NRC Request 2(b)

Whether the Hemyc and/or MT installed in their plants is conforming with their licensing basis in light of recent findings, and if these recent findings do not apply, why not.

Response 2(b)

Recent testing appears to call into question the ability of the Hemyc wrap to satisfy the intended one-hour fire rating. Therefore, installations of Hemyc at HBRSEP, Unit No. 2, have been conservatively considered inoperable. It is noted that the NRC Hemyc testing was conducted

differently than the test protocol that conforms with the HBRSEP, Unit No. 2, licensing basis; however, the NRC's testing results were cause for concern and action has been taken as described in Response 2(d) below.

NRC Request 2(c)

The compensatory measures that have been implemented to provide protection and maintain the safe shutdown function of affected areas of the plant in light of the recent findings associated with Hemyc and MT installations, including evaluations to support the addressees' conclusions.

Response 2(c)

HBRSEP, Unit No. 2, procedure FP-012, "Fire Protection Systems Minimum Equipment and Compensatory Actions," required the CCW Pump Room fire detection system be verified operable within one (1) hour of declaring the effected CCW Pump Hemyc wrap to be inoperable. FP-012 also requires that a continuous fire watch with backup fire suppression equipment (fire extinguishers or hose stations) be established within one (1) hour should the CCW Pump Room fire detection system become inoperable.

In addition, Operations Night Order 05-04 instituted the following compensatory actions on April 1, 2005:

1. Transient combustible permits are not allowed to be written for an exclusion area immediately around the CCW Pumps and Hemyc fire wrap. This requirement has been incorporated into procedure FP-003, "Control of Transient Combustibles."
2. At least one (1) additional Operator round per shift through the CCW Pump Room was established to look for hazards in the exclusion area.

NRC Request 2(d)

A description of, and implementation schedules for, corrective actions, including a description of any licensing actions or exemption requests needed to support changes to the plant licensing basis.

Response 2(d)

On June 10, 2005, Progress Energy submitted to the NRC a letter of intent to transition the HBRSEP, Unit No. 2, Fire Protection Licensing Basis to the National Fire Protection Association (NFPA) 805 methodology (10 CFR 50.48c). The NFPA 805 transition is expected to start in 2007 and be completed by 2010. However, as a proactive measure, the Hemyc fire wrap is being replaced by a new ERFBS that will provide a one-hour fire rating that has been tested and qualified in accordance with GL 86-10, Supplement 1. The replacement fire wrap will be installed by December 1, 2007.

NRC Request 3

No later than December 1, 2007, addressees that identified in 1.a. Hemyc and/or MT configurations are requested to provide a description of actions taken to resolve the nonconforming conditions described in 2.d.

Response 3

As stated in Response 2(d), the nonconforming conditions will be resolved by December 1, 2007.