



Serial: RNP-RA/07-0018

MAY 03 2007

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 2007-01,
"INACCESSIBLE OR UNDERGROUND POWER CABLE FAILURES
THAT DISABLE ACCIDENT MITIGATION SYSTEMS OR CAUSE PLANT TRANSIENTS"

Ladies and Gentlemen:

On February 7, 2007, NRC Generic Letter 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients," was issued requesting that licensees provide a response within 90 days. Carolina Power and Light Company, also known as Progress Energy Carolinas, Inc., 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).

There are no commitments associated with this letter.

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

ANH/anh

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

A127

United States Nuclear Regulatory Commission

Serial: RNP-RA/07-0018

Page 2 of 2

Attachments:

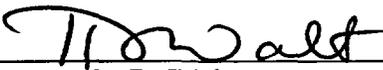
- I. **Affirmation**
- II. **Response to NRC Generic Letter 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients"**

**c: Dr. W. D. Travers, NRC, Region II
Ms. L. M. Regner, NRC, NRR
NRC Resident Inspector**

AFFIRMATION

The information contained in letter RNP-RA/07-0018 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: 5/3/07



T. D. Walt
Vice President, HBRSEP, Unit No. 2

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

**RESPONSE TO NRC GENERIC LETTER 2007-01,
“INACCESSIBLE OR UNDERGROUND
POWER CABLE FAILURES THAT DISABLE ACCIDENT
MITIGATION SYSTEMS OR CAUSE PLANT TRANSIENTS”**

Background

NRC Generic Letter (GL) 2007-01, “Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients,” requires that, within 90 days of the issuance of the Generic Letter, all addressees submit to the NRC the following information:

- (1) Provide a history of inaccessible or underground power cable failures for all cables that are within the scope of 10 CFR 50.65 (the Maintenance Rule) and for all voltage levels. Indicate the type, manufacturer, date of failure, type of service, voltage class, years of service, and the root causes for the failure.
- (2) Describe inspection, testing and monitoring programs to detect the degradation of inaccessible or underground power cables that support EDGs, offsite power, ESW, service water, component cooling water and other systems that are within the scope of 10 CFR 50.65 (the Maintenance Rule).

In a letter from James H. Riley (Nuclear Energy Institute [NEI]) to plant administrative contacts, dated March 16, 2007, NEI provided guidance for developing a response to GL 2007-01. The NRC accepted the guidance, with certain modifications, in a letter from Michael J. Case (NRC) to James H. Riley, dated April 13, 2007. The responses provided were developed using the NEI guidance as modified by the NRC letter.

The following information is provided in response to Items (1) and (2) for the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2.

RESPONSE (1):

HBRSEP, Unit No. 2, has performed a review of plant document history to identify inaccessible or underground power cable failures. The search identified six failures, four of which were attributed to inadvertent damage during construction work. One cable failure was attributed to a settling building structure, and one cable failure was most likely due to an underground splice failure, although the precise failure mechanism is indeterminate.

Due to the age of the plant and regulatory requirements in existence at the time the plant was licensed, certain data could not be determined. These table values are marked “indeterminate.”

Type	Manufacturer	Date of Failure	Type of Service	Voltage Class	Voltage Range	Years of Service	Cause of Failure
Non-shielded	Rome Cable	12/27/1984	Energized Deep Well Pump "B"	600	460	Indeterminate	Cable was damaged during excavation.
Non-shielded	Indeterminate	10/23/1987	De-energized Service Water Valve V6-12A	600	460	Indeterminate	Cable was damaged during excavation.
Non-shielded	Indeterminate	12/2/1990	Service Water	600	460 or 120	Indeterminate	Cable was damaged during excavation.
Non-shielded	Indeterminate	10/16/2002 ¹	De-energized EDG Fuel Oil Transfer Pump "B"	600	460	Indeterminate	Cable was damaged during excavation.
Non-shielded	Indeterminate	1980 ²	Service Water	600	460 or 120	Indeterminate	Cable was damaged by a settling building structure.
Non-shielded	Rome Cable	9/17/2004	Energized Deep Well Pump "B"	600	460	Indeterminate	Indeterminate, but most likely caused by underground splice failure.

¹ Date is approximate; cable damage was discovered when the component was re-energized.

² Time frame is approximate; this occurrence is based primarily on recollections of longer-term plant employees.

RESPONSE (2):

HBRSEP, Unit No. 2, procedure PM-479, "Motor Testing," is used to perform off-line testing of motor winding insulation resistance and circuit resistive balance of plant electric motors. This testing is performed for critical and important motors, and is typically conducted from the motor control center (MCC) breaker to determine the health of the motor and the associated power cable. PM-479 includes the "AC standard" test which consists of low resistive DC bridge, inductive AC bridge, AC capacitance to ground, and DC megohm to ground tests. Dielectric absorption, polarization index, stepped DC hi-pot, and rotor influence check may also be performed, if deemed necessary. Additional guidance and basis for preventative maintenance (PM) tasks for medium and low voltage electric motors is provided by the PM Basis document, NGG-PMB-MOT-01, "NGG Equipment Reliability Template Medium and Low Voltage Electric Motors." Procedure MMM-053, "Electrical Installation," directs that multi-conductor cable reels be meggered and tested for continuity upon receipt.

Engineering review of inaccessible and underground power cables within the scope of NRC Generic Letter 2007-01 found that underground safety-related service water cables to the intake structure are routed through manholes that allow visual examination for cable degradation. These manholes have sump pumps or drainage holes to minimize submergence.