July 31, 2003

LICENSEE: Carolina Power & Light Company

FACILITY: H. B. Robinson Nuclear Station

SUBJECT: SUMMARY OF CONFERENCE CALL BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION (NRC) STAFF AND CAROLINA POWER & LIGHT COMPANY REPRESENTATIVES TO DISCUSS THE H. B. ROBINSON NUCLEAR STATION (HBRNS) LICENSE RENEWAL APPLICATION (LRA)

On June 4, 2003, the NRC staff and representatives from the Carolina Power & Light Company (CP&L) held a conference call to clarify the final response to RAI 3.6.1-2, submitted by the applicant on April 28, 2003. A follow-up conference call was held on June 5, 2003, with the objective of providing further clarification on the previous issues.

Enclosures 1 and 2 contain a written summary of the conference calls held on June 4, and June 5, 2003, respectively. The combined list of participants is provided in Enclosure 3. Enclosure 4 contains the list of questions prepared by the NRC staff that required clarification on the part of the applicant. Enclosure 5 is an email, which contains the list of questions prepared by the NRC staff and the answers provided by the applicant on May 29, 2003.

A draft of this conference call was provided to the applicant to allow them the opportunity to comment prior to being issued.

/RA/

Sikhindra K. Mitra, Project Manager
License Renewal Section A
License Renewal and Environmental Impacts Programs
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No.: 50-261

Enclosures: As stated

cc w/enclosures: See next page

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Sikhindra K. Mitra, Project Manager
License Renewal Section A
License Renewal and Environmental Impacts Programs
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OFFICE	PM:RLEP:DRIP	LA:RLEP:DRIP	PM:RLEP:DRIP	SC:RLEP:DRIP
NAME	MCora	YEdmonds	SKMitra	SLee
DATE	7/18/03	7/24/03	7/30/03	7/31/03

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RLEP RF
S. K. Mitra
M. Cora

E-MAIL:

PUBLIC
W. Borchardt
D. Matthews
F. Gillespie
C. Grimes
RidsNrrDe
E. Imbro
G. Bagchi
K. Manoly
W. Bateman
J. Calvo
C. Holden
P. Shemanski
H. Nieh
H. Walker
S. Black
B. Boger
D. Thatcher
R. Pettis
G. Galletti
C. Li
J. Moore
R. Weisman
M. Mayfield
A. Murphy
W. McDowell
S. Smith (srs3)
S. Duraiswamy
RLEP Staff

C. Patel
B. Desai
C Julian (R II)
S. Uttal (OGC)
C. Munson
A. Pal

Mr. J. W. Moyer
Carolina Power & Light Company
cc:

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

Mr. John Moyer, Vice President
H. B. Robinson Steam Electric Plant
Carolina Power and Light Company
3581 West Entrance Road
Hartsville, SC 29550

Mr. William D. Johnson
Vice President and Corporate Secretary
Carolina Power & Light Company
Post Office Box 1551
Raleigh, NC 27602

Ms. Karen E. Long
Assistant Attorney General
State of North Carolina
Post Office Box 629
Raleigh, NC 27602

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
H. B. Robinson Steam Electric Plant
2112 Old Camden Road
Hartsville, SC 29550

Mr. T. P. Cleary
Plant General Manager
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant, Unit No. 2
3581 West Entrance Road
Hartsville, SC 29550

Mr. Chris L. Burton
Director of Site Operations
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant, Unit No. 2
3581 West Entrance Road
Hartsville, SC 29550

Public Service Commission
Post Office Drawer 11649
State of South Carolina
Columbia, SC 29211

Mr. C. T. Baucom
Supervisor, Licensing/Regulatory Programs
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant
Unit No. 2
3581 West Entrance Road
Hartsville, SC 29550

Ms. Beverly Hall, Acting Director
N.C. Department of Environment
and Natural Resources
Division of Radiation Protection
3825 Barrett Dr.
Raleigh, NC 27609-7721

Mr. Robert P. Gruber
Executive Director
Public Staff - NCUC
4326 Mail Service Center
Raleigh, NC 27699-4326

Mr. Virgil R. Autry, Director
South Carolina Department of Health
Bureau of Land & Waste Management
Division of Radioactive Waste
2600 Bull Street
Columbia, SC 29201

Mr. Terry C. Morton, Manager
Performance Evaluation and
Regulatory Affairs CPB 7
Carolina Power & Light Company
Post Office Box 1551
Raleigh, NC 27602-1551

Mr. John H. O'Neill, Jr.
Shaw, Pittman, Potts & Trowbridge
2300 N Street, NW.
Washington, DC 20037-1128

Mr. B. L. Fletcher III
Manager - Regulatory Affairs
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant
Unit No. 2
3581 West Entrance Road
Hartsville, SC 29550-0790

Mr. Fred Emerson
Nuclear Energy Institute
1776 I Street, NW., Suite 400
Washington, DC 20006-3708

Talmage B. Clements
Manager - License Renewal
Carolina Power and Light Company
410 South Wilmington Street
Raleigh, NC 27602

Mr. Roger A. Stewart
Carolina Power and Light Company
H. B. Robinson Steam Electric Plant, Unit
No. 2
3581 West Entrance Road
Hartsville, SC 29550

SUMMARY OF CONFERENCE CALL BETWEEN NRC AND CAROLINA POWER & LIGHT COMPANY JUNE 4, 2003

RAI 3.6.1-2

On May 28, 2003, the NRC staff requested clarification and electronically submitted several questions to the applicant for clarification (Enclosure 4). On May 29, 2003, the applicant submitted a draft response via email communication (Enclosure 5) for the NRC electrical engineering staff review. A conference call was held on June 4, 2003, to clarify Item 2, which relates to the types of cables used inside and outside containment. The response to Item 2 was incomplete since it did not include the type of cable used inside containment for wide range circuits. The NRC staff informed the applicant, that Rockbestos RSS-6-108/LE cables for source range, intermediate range, and power range circuits were not included in Section 4.4.1 of the LRA.

In addition, the NRC staff requested the applicant to modify the statement in the "Operating Experience (OE)" Section of Attachment 1, listed on page 275, of the RNP final RAI Response Document (April 28, 2003), to address the site specific and industry wide OE. The applicant agreed to make the requested modification.

Enclosure 1

SUMMARY OF CONFERENCE CALL BETWEEN NRC AND CAROLINA POWER & LIGHT COMPANY JUNE 5, 2003

RAI 3.6.1-2

On June 5, 2003, the applicant requested a conference call with the technical reviewer to further clarify the discussion held the previous day between both parties. As a result of the staff's concern discussed during the June 4, 2003, conference call, the applicant stated that the response to Item 2 and 3 (Enclosure 5) were incorrect. Upon further discussion between both parties, the applicant agreed to revise their response to Items 2, 3, 4, and 7, listed in Enclosure 5. In addition, the applicant stated that they need to revise OE of Attachments 1 and 2 of the RAI 3.6.1-2 response submitted in April 28, 2003.

Enclosure 2

ATTENDANCE LIST
CONFERENCE CALL BETWEEN NRC AND
CAROLINA POWER & LIGHT COMPANY
JUNE 4 & 5, 2003

NAME	ORGANIZATION
Amar N. Pal	NRR/DE/EEIB
SK Mitra*	NRC/NRR/DRIP/RLEP
Mario G. Cora	NRC/NRR/DRIP/RLEP
Michael Heath	CP&L

*Member only participated in June 5, 2003, call
Note: All members in the list participated via telephone call

Enclosure 3

Neutron Flux Instrumentation Circuits

1. Detection of Aging Effects of Aging Management Program for Neutron Flux Instrumentation Circuits should cover both cables and connections and testing should include a combination of tests.

2. Describe types of cables used inside and outside containment. Are the same cables types used inside and outside containment?

3. Are any of these cables covered under EQ program? If so, what is the qualified life of the cables?

4. Provide operating experience of these cables.

5. How often are these cables inspected, tested, and replaced? Summarize the results of inspection, testing and replacement.

6. What is I/V test? Is this a power factor or loss factor test? What is the test voltage for this test?

7. What is the technical basis for the ten year frequency of this test.

From: "Heath, Mike" <mike.heath@pgnmail.com>
To: "SK Mitra (skm1@nrc.gov)" <skm1@nrc.gov>
Subject: Neutron Flux Instrumentation Circuits.doc
Date: Thu, 29 May 2003 12:17:43 -0400

This is my draft response concerning the questions on the alternate E2 program.

Neutron Flux Instrumentation Circuits

1. Detection of Aging Effects of Aging Management Program for Neutron Flux instrumentation circuits should cover both cables and connections and testing should include a combination of tests.

Response:

The purpose of GALL aging management program XI.E2 is to detect reduction in insulation resistance in circuits with low level signals, which is stated in the program description as follows:

"Exposure of electrical cables to adverse localized environments caused by heat or radiation can result in reduced insulation resistance (IR). Reduced IR causes an increase in leakage currents between conductors and from individual conductors to ground. A reduction in IR is a concern for circuits with sensitive, low-level signals, such as radiation monitoring and nuclear instrumentation since it may contribute to inaccuracies in instrument circuits."

Progress Energy proposed an alternate program to GALL XI.E2 to provide a more direct means of determining the condition of the cable system. Insulation resistance, time domain reflectometry (TDR), and current versus voltage (I/V) testing all provide direct indication of the condition of both cables and connections in neutron monitoring circuits and all represent valid tests for the cabling system. A program that performs any one of these tests is sufficient to provide indication of a reduction in insulation resistance. This program allows the plant to perform one or more of these tests, or some other appropriate test, which gives the plant the flexibility to apply the test (or tests), which best meet their needs.

2. Describe types of cables used inside and outside containment. Are the same cable types used inside and outside containment?

Response:

The source range, intermediate range, and power range circuits use Rockbestos RSS-6-108/LE triaxial cables both inside and outside containment. The wide range circuits outside containment use Gamma-metrics Part No. 200722-050 and 200749-101 cable assemblies. The Gamma-metrics cables used inside containment are fully qualified for a harsh environment.

3. Are any of these cables covered under the EQ program? If so, what is the qualified life of the cables?

Response:

The cables, connectors, and penetrations inside containment are in the EQ program and have been evaluated for a 60 year qualified life. While the EQ cables will typically remain connected to the non-EQ cables addressed by this program during testing, they are not required to be tested by this program.

4. Provide operating experience for these cables.

Response:

This program applies to the non-EQ neutron monitoring cables. No operating experience was identified that indicates these cables or connectors have experienced any age related degradation. These cables and connections are all located in mild environments.

5. How often are these cables inspected, tested, and replaced?

Response:

The cabling system for this instrumentation is not inspected, tested, or replaced on a routine basis.

6. What is I/V testing? Is this a power factor or loss factor test? What is the test voltage for this test?

Response:

Current versus voltage (I/V) testing evaluates the neutron monitoring cabling system and detector as a unit. This test injects voltage step changes typically from 0 volts to 500 volts, 800 volts, or 1000 volts, depending on the cable being tested, into the cable/detector system, and measures the resulting current. These results are charted, and the shape and slope of the curve are evaluated, to determine the condition of the cabling and detector system. This is not a power factor or loss factor test. This type of testing is not currently used at RNP but was included in the aging management program for completeness.

7. What is the technical basis for the 10 year frequency of this test?

Response:

This program is for non-EQ neutron monitoring cabling systems. These cabling systems are located in non-harsh environments and none have experienced age related degradation.

Existing operating experience for neutron monitoring cabling systems is associated with cables located in environments exposed to heat, radiation, or moisture. The cabling systems addressed by this program are not exposed to these harsh environments. The 10 year frequency is considered sufficient based on the absence of aging mechanisms or operating experience showing age related degradation.