

June 24, 2002

LICENSEE : Duke Energy Corporation

FACILITIES: McGuire, Units 1 and 2, and Catawba, Units 1 and 2

SUBJECT: TELECOMMUNICATION WITH DUKE ENERGY CORPORATION TO DISCUSS
THE RESPONSE TO A REQUEST FOR ADDITIONAL INFORMATION
PERTAINING TO SECTIONS 3.6 AND B.3.19 OF THE LICENSE RENEWAL
APPLICATION

On January 17, 2002, the NRC staff (hereafter referred to as "the staff") issued a request for additional information (RAI) pertaining to Section 3.6.1, Aging Effects Caused by Heat and Radiation, and Section B.3.19, Inaccessible Non-EQ Medium-voltage Cables Aging Management Program, of the license renewal application (LRA). Duke Energy Corporation (hereafter referred to as "the applicant") responded to this request by letters dated March 8, 2002, and April 15, 2002. On May 29, 2002, a conference call was conducted between the NRC and Duke Energy Corporation to discuss information that was provided to the NRC in response to RAIs 3.6.1-1 and B.3.19-2. Participants of the May 29, 2002, conference call are provided in an attachment.

RAI 3.6.1-1

The applicant reiterated its response to RAI 3.6.1-1, indicating that Duke is very confident that the visual inspections outlined in Section B.3.23, Non-EQ Insulated Cables and Connections Aging Management Program, will enable early detection of aging degradation of insulation of all types of cables and connections, including low signal level cables used in sensitive instrumentation applications.

The staff indicated, however, that visual inspection alone would not necessarily detect reduced insulation resistance (IR) levels in cable insulation before the intended function is lost. Exposure of electrical cables to adverse localized environments caused by heat or radiation can result in reduced IR. A reduction in IR will cause an increase in leakage currents between conductors and from individual conductors to ground, and is a concern for circuits with sensitive, low level signals such as radiation and nuclear instrumentation since it may contribute to inaccuracies in the instrument loop. Because low level signal instrumentation circuits may operate with signals that are normally in the low milliamp range or less, they can be affected by extremely low levels of leakage current. The staff also indicated that it is not convinced that aging of these cables will initially occur on the outer casing resulting in sufficient damage such that visual inspection will be effective in detecting the degradation before IR losses lead to a loss in intended function, particularly if the cables are also subject to moisture. For this reason, the staff described aging management program XI.E2, Electrical Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Used in Instrumentation Circuits, in the Generic Aging Lessons Learned (GALL) report. This GALL report program treats low signal

level cables as a special group of cables that warrant more rigorous monitoring to ensure aging is being adequately monitored. Since the applicant proposes to perform visual inspections to detect aging degradation of insulation of all types of cables and connections, including low signal level cables used in sensitive instrumentation applications, this issue may be identified as an open item in the Safety Evaluation Report to be issued by August 12, 2002.

RAI B.3.19-2

The applicant and staff discussed a recent decision by the Nuclear Energy Institute (NEI) to defer to Duke's position pertaining to the definition of "significant moisture." During an April 10, 2002, meeting with the staff (documented by Memorandum dated April 22, 2002, ADAMS Accession Number ML021120407), the NEI Electrical Working Group had accepted an action to evaluate the potential need to clarify the definition of "significant moisture" based upon a review of industry research literature and operating experience. However, the NEI subsequently decided to defer to the position stated in Duke's response to RAI B.3.19-2, which stated that a review of industry literature on the topic of medium-voltage cables being exposed to moisture for long periods revealed no quantifiable data. In its response, Duke further stated that data and discussions in the industry literature, which is referenced in the RAI response, provides the reader with the general conclusion that there should not be a problem with a medium-voltage cable even if it is exposed to moisture for several years. Duke also referenced Program XI.E3, Inaccessible Medium-voltage Cables not Subject to 10 CFR 50.49 Environmental Qualification Requirements, of the GALL report to support their interpretation of "significant moisture." Specifically, program element 4, Detection of Aging Effects, states that testing of in-scope, medium -voltage cables that are exposed to significant moisture and significant voltage every 10 years is adequate to preclude failure of the conductor insulation since experience has shown that aging degradation is a slow process.

The staff acknowledged Duke's response to the RAI and the implied difference between the XI.E3 program description and their current assessment of the program proposed by Duke. As such, the staff will consider the need to modify the GALL report to describe a program that provides adequate assurance that aging of medium-voltage cables that may be exposed to moisture will be adequately monitored or managed during the extended period of operation. The staff indicated that the applicant had not provided sufficient justification in the LRA or in the RAI response for defining "significant moisture" as exposure to long-term (over a period of a few years), continuous (going on or extending without interruption or break) standing water. The staff also indicated that the applicant's program description in the LRA did not provide adequate information about the proposed alternative inspection program in that it did not specify (1) the frequency of inspection; (2) how inspection results will be monitored and trended; (3) if or when operability evaluations for degraded conditions (presence of moisture) would be performed; (4) if or when testing would be performed if moisture is identified; and (5) what corrective actions would be taken in the event that cables exposed to moisture are identified. This issue may be identified as an open item in the Safety Evaluation Report to be issued by August 12, 2002.

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

/RA/

Rani L. Franovich, Project Manager
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos. 50-369, 50-370, 50-413, and 50-414

Attachment: As stated

cc w/attachment: See next page

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

/RA/

Rani L. Franovich, Project Manager
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos. 50-369, 50-370, 50-413, and 50-414

Attachment: As stated

cc w/attachment: See next page

DISTRIBUTION:

See next page

Document Name: C:\ORPCheckout\FileNET\ML021750433.wpd

OFFICE	LA:DRIP	TR:IEHB:DE	TR:IEHB:DE	PM:RLEP:DRIP	PM:RLEP:DRIP
NAME	EHylton	DNguyen	JLazevnick	RFranovich	SHoffman
DATE	6/19 /02	6/19 /02	6/21/02	6/21/02	6/24/02

OFFICIAL RECORD COPY

DISTRIBUTION:

HARD COPY

RLEP RF

E. Hylton

E-MAIL:

PUBLIC

J. Johnson

W. Borchardt

D. Matthews

F. Gillespie

P.T. Kuo

C. Casto

E. Imbro

G. Bagchi

K. Manoly

W. Bateman

J. Calvo

C. Holden

P. Shemanski

H. Nieh

G. Holahan

S. Black

B. Boger

D. Thatcher

G. Galletti

J. Moore

R. Weisman

M. Mayfield

A. Murphy

W. McDowell

S. Droggitis

S. Duraiswamy

RLEP Staff

R. Martin

C. Patel

C. Julian (RII)

R. Haag (RII)

S. Uttal (OGC)

M. Khanna

H. Walker

D. Nguyen

J. Lazevnick

McGuire & Catawba Nuclear Stations, Units 1 and 2

Mr. Gary Gilbert
Regulatory Compliance Manager
Duke Energy Corporation
4800 Concord Road
York, South Carolina 29745

Ms. Lisa F. Vaughn
Duke Energy Corporation
422 South Church Street
Charlotte, North Carolina 28201-1006

Anne Cottingham, Esquire
Winston and Strawn
1400 L Street, NW
Washington, DC 20005

North Carolina Municipal Power
Agency Number 1
1427 Meadowood Boulevard
P. O. Box 29513
Raleigh, North Carolina 27626

County Manager of York County
York County Courthouse
York, South Carolina 29745

Piedmont Municipal Power Agency
121 Village Drive
Greer, South Carolina 29651

Ms. Karen E. Long
Assistant Attorney General
North Carolina Department of Justice
P. O. Box 629
Raleigh, North Carolina 27602

Ms. Elaine Wathen, Lead REP Planner
Division of Emergency Management
116 West Jones Street
Raleigh, North Carolina 27603-1335

Mr. Robert L. Gill, Jr.
Duke Energy Corporation
Mail Stop EC-12R
P. O. Box 1006
Charlotte, North Carolina 28201-1006

Mr. Alan Nelson
Nuclear Energy Institute
1776 I Street, N.W., Suite 400
Washington, DC 20006-3708

North Carolina Electric Membership
Corporation
P. O. Box 27306
Raleigh, North Carolina 27611

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
4830 Concord Road
York, South Carolina 29745

Mr. Henry J. Porter, Assistant Director
Division of Waste Management
Bureau of Land & Waste Management
S.C. Dept of Health and Environ. Control
2600 Bull Street
Columbia, South Carolina 29201-1708

Mr. C. Jeffrey Thomas
Manager - Nuclear Regulatory Licensing
Duke Energy Corporation
526 South Church Street
Charlotte, North Carolina 28201-1006

Mr. L. A. Keller
Duke Energy Corporation
526 South Church Street
Charlotte, North Carolina 28201-1006

Saluda River Electric
P. O. Box 929
Laurens, South Carolina 29360

Mr. Peter R. Harden, IV
VP-Customer Relations and Sales
Westinghouse Electric Company
6000 Fairview Road - 12th Floor
Charlotte, North Carolina 28210

Mr. T. Richard Puryear
Owners Group (NCEMC)
Duke Energy Corporation
4800 Concord Road
York, South Carolina 29745

Mr. Richard M. Fry, Director
North Carolina Dept of Env, Health, and
Natural Resources
3825 Barrett Drive
Raleigh, North Carolina 27609-7721

County Manager of
Mecklenburg County
720 East Fourth Street
Charlotte, North Carolina 28202

Michael T. Cash
Regulatory Compliance Manager

Duke Energy Corporation
McGuire Nuclear Site
12700 Hagers Ferry Road
Huntersville, North Carolina 28078

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
12700 Hagers Ferry Road
Huntersville, North Carolina 28078

Dr. John M. Barry
Mecklenburg County
Department of Environmental Protection
700 N. Tryon Street
Charlotte, North Carolina 28202

Mr. Gregory D. Robison
Duke Energy Corporation
Mail Stop EC-12R
526 S. Church Street
Charlotte, NC 28201-1006

Mary Olson
Nuclear Information & Resource Service
Southeast Office
P.O. Box 7586
Asheville, North Carolina 28802

Paul Gunter
Nuclear Information & Resource Service
1424 16th Street NW, Suite 404
Washington, DC 20036

Lou Zeller
Blue Ridge Environmental Defense League
P.O. Box 88
Glendale Springs, North Carolina 28629

Don Moniak
Blue Ridge Environmental Defense League
Aiken Office
P.O. Box 3487
Aiken, South Carolina 29802-3487

Mr. Kevin Cox
The Huntersville Star
P.O. Box 2542
Huntersville, NC 28070

TELECOMMUNICATION PARTICIPANTS
May 29, 2002

Staff Participants

Rani Franovich

Duc Nguyen

James Lazevnick

Duke Energy Corporation Participants

Bob Gill

Paul Colaianni