

April 13, 2007

Mr. James H. Riley
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1776 I Street, NW
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SUBJECT: RESPONSE TO NUCLEAR ENERGY INSTITUTE (NEI) LETTER DATED
MARCH 26, 2007 - RE: INTERPRETATION OF GENERIC LETTER
(GL) 2007-01, INACCESSIBLE OR UNDERGROUND POWER CABLE
FAILURES THAT DISABLE ACCIDENT MITIGATION SYSTEMS OR CAUSE
PLANT TRANSIENTS

Generic Letter 2007-01 "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients" was issued by the Nuclear Regulatory Commission (NRC) on February 7, 2007 (Agencywide Documents and Access Management System, Accession No. ML070360665). By letter dated March 26, 2007 (ADAMS Accession No. ML070950462), NEI submitted their interpretations of the information requested in GL 2007-01 and requested confirmation of their interpretations from the staff. These interpretations are included in Enclosure 1.

The staff has completed its review of the NEI interpretations of the information requested in GL 2007-01 and finds that the guidance provided by NEI would meet the information requests of the GL except as described in Items 1 through 3 below:

1. Regarding the subject of "Failure History," NEI's interpretation stated that the search for cable failures should start at the beginning of automation of data recording. Cable failure data that has been electronically catalogued or recorded is subject to the information request in the GL. Automated data recording may contain data regarding events and failures that occurred prior to the date that automation (electronic cataloguing of data) had been implemented (i.e., documents that were generated prior to the automated data recording capability could have been scanned into the database and, therefore, available to be searched). The scope of the search shall not be limited to the date that automated data recording was implemented. The scope of the search shall include cable failures that can be searched for in an electronic database, regardless of the actual date of the failure.
2. Regarding the subject of "Failure History," NEI's interpretation stated that licensees should expect the testing failure history to be treated separately. The staff will determine if cable testing failures will be treated separately; therefore, licensees should not expect cable testing failures to be treated separately.

3. Regarding the subject of "Voltage Range," NEI's interpretation stated a low voltage limit of 480 Volts Alternating Current (VAC) and a high voltage limit of 15,000 VAC would be used. The GL states "power cable failures"... "for all voltage levels." However, the GL only requests information on power cables. Typically, this would exclude DC cables and those cables less than 480 VAC and above 15,000 VAC.

Enclosure 2 provides guidance that the staff considers to meet the information requests of the GL based on the above discussion. It is the staff's expectation that Enclosure 2 will be applied in the responses to the GL.

If you have any questions regarding this matter please contact George Wilson, Branch Chief, Electrical Engineering Branch at 301-415-1711.

Sincerely,

/RA by TQuay for/

Michael J. Case, Director
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Enclosures: As Stated

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3. Regarding the subject of "Voltage Range," NEI's interpretation stated a low voltage limit of 480 Volts Alternating Current (VAC) and a high voltage limit of 15,000 VAC would be used. The GL states "power cable failures"... "for all voltage levels." However, the GL only requests information on power cables. Typically, this would exclude DC cables and those cables less than 480 VAC and above 15,000 VAC.

Enclosure 2 provides guidance that the staff considers to meet the information requests of the GL based on the above discussion. It is the staff's expectation that Enclosure 2 will be applied in the responses to the GL.

If you have any questions regarding this matter please contact George Wilson, Branch Chief, Electrical Engineering Branch at 301-415-1711.

Sincerely,

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Michael J. Case, Director
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Enclosures: As Stated

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Accession Number: ML070940311

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NUCLEAR ENERGY INSTITUTE INTERPRETATIONS
OF THE INFORMATION REQUESTS FOR GL 2007-01
(FROM 03/26/2007 LETTER)

These subjects will be addressed using the following interpretations:

1. Power cables only
 - a. Include distribution cables (buss, MCC, load center feeds)
 - b. Exclude instrumentation, control, indication, etc. cables
2. Voltage range
 - a. Use low voltage limit of 480 VAC
 - b. Use high voltage limit of 15,000 VAC
3. Failure history
 - a. Start at the beginning of automation of data recording
 - b. Include in-service failures
 - c. Include testing failures
 - i. Identify clearly that it was a testing failure
 - ii. Identify type of testing (withstand, testing-to-failure, Hi-Pot, or condition assessment below your acceptance criteria), if available
 - iii. Expect the failure history to be treated separately
4. Type
 - a. Specify insulation type
 - b. Specify if shielded
5. Type of Service
 - a. Identify normally energized or de-energized (energized defined as 25% of the time or more)
 - b. Identify component supported
 - c. Identify cable ID
6. Voltage Class
 - a. Identify nominal service voltage
 - b. Identify cable rating voltage
7. Root Cause of Failures
 - a. Identify apparent cause of failure
 - b. Record document reference(s)

STAFF GUIDANCE FOR MEETING THE INFORMATION REQUESTS
CONTAINED IN GENERIC LETTER 2007-01 *

These subjects will be addressed using the following interpretations:

1. Power cables only
 - a. Include distribution cables (buss, MCC, load center feeds)
 - b. Exclude instrumentation, control, indication, etc. cables
2. Voltage range
 - a. **All voltage levels. (AC and DC) Note: Power cables only, which excludes most DC cables, instrumentation, control, and indication cables.**
3. Failure history
 - a. **Include cable failures that can be searched for in an electronic database, regardless of the actual date of the failure**
 - b. Include in-service failures
 - c. Include testing failures
 - i. Identify clearly that it was a testing failure
 - ii. Identify type of testing (withstand, testing-to-failure, Hi-Pot, or condition assessment below your acceptance criteria), if available
 - iii. **Do not expect cable testing failures to be treated separately**
4. Type
 - a. Specify insulation type
 - b. Specify if shielded
5. Type of Service
 - a. Identify normally energized or de-energized (energized defined as 25% of the time or more)
 - b. Identify component supported
 - c. Identify cable ID
6. Voltage Class
 - a. Identify nominal service voltage
 - b. Identify cable rating voltage
7. Root Cause of Failures
 - a. Identify apparent cause of failure
 - b. Record document reference(s)

* NOTE: The differences between the NEI interpretations and the staff guidance are identified in **bold** (2.a, 3.a, and 3.c.iii).