

May 7, 2007

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
11555 Rockville Pike, Rockville, MD 20852

Ladies and Gentlemen:

ULNRC-05415

**DOCKET NO. 50-483  
CALLAWAY PLANT UNIT 1  
UNION ELECTRIC CO.  
90 DAY RESPONSE TO NRC GENERIC LETTER 2007-01,  
INACCESSIBLE OR UNDERGROUND POWER CABLE FAILURES THAT  
DISABLE ACCIDENT MITIGATION SYSTEMS OR  
CAUSE PLANT TRANSIENTS**

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Pursuant to 10 CFR 50.54(f), this letter provides the Union Electric Company (AmerenUE) 90-day response to NRC Generic Letter 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients." The generic letter requests licensees to provide a history of inaccessible or underground power cable failures and to describe inspection, testing and monitoring programs to detect the degradation of inaccessible or underground power cables for cables within the scope of 10 CFR 50.65.

There are no commitments made to the NRC by this letter. If you have questions regarding this response, please contact D. E. Shafer at 314-554-3104.

I declare under penalty of perjury that the foregoing is true and correct.

Very truly yours,

Executed on the 7<sup>th</sup> day of May, 2007.

A handwritten signature in black ink, appearing to read "D. T. Fitzgerald".

David T. Fitzgerald  
Manager - Regulatory Affairs

DS/jdg

Attachment: 90-day Response to Generic Letter 2007-01

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***(Certrec receives ALL attachments  
as long as they are non-safeguards  
and public disclosed).***

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**Response to Requested Information of NRC Generic Letter 2007-01,  
Inaccessible or Underground Power Cable Failures that Disable  
Accident Mitigation Systems or Cause Plant Transients**

Below is the Union Electric Company (AmerenUE) response to the Requested Information of NRC Generic Letter 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients." The generic letter's "Requested Information" is shown in bold followed by AmerenUE's response.

**NRC Requested Information Item (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.**

**AmerenUE Response (1):**

Research into inaccessible or underground power cable failures at Callaway Plant revealed one failure in power cables within the scope of 10 CFR 50.65 in the voltage range between 480 VAC and 15,000 VAC. Table 1 contains the information requested as well as additional information on failure type, component supported and cable identifier.

**NRC Requested Information Item (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).**

**AmerenUE Response (2):**

AmerenUE performs a limited amount of insulation resistance and polarization index testing on selected cables during routine motor circuit evaluation testing, overhaul or maintenance of the equipment they feed. AmerenUE has not implemented other inspection, testing or monitoring programs to detect the degradation of inaccessible or underground power cables.

AmerenUE performs the following actions on a routine basis to eliminate or minimize conditions known to impact cable degradation rates for cables that are within the scope of 10 CFR 50.65:

- Periodically perform visual inspection for corrosion and degradation of cable tray supports for selected cables.
- Periodically inspect and dewater selected manholes.

**Table 1. AmerenUE Inaccessible or Underground Power Cable Failures**

Failure #	Failure Type (inservice/testing)	Cable Type (Insulation Type)	Cable Type (Shielded, Yes/No)	Cable Manufacturer	Date of Failure	Type of Service (energized/deenergized)	Component Supported	Cable Identifier	Voltage Class (nominal service voltage)	Voltage Class (cable rating voltage)	Years of Service Prior to Failure	Root Causes for the Failure (apparent cause)
1	Inservice	Ethylene propylene insulation with Hypalon jacket	No	Anaconda (Durasheath EP)	Exact date unknown. Identified on 1/7/1990	Energized during low temperature operations only	UHS sump heater SEF02D	6EFG13PA	480V	600V	Approx 6 years	Unknown. Details are limited for this non-safety job. Failed cable suspected of being subjected to excessive strain during initial installation which led to eventual failure. Identical replacement cables in service for 17 years. Cause is unverified.