



Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043

May 4, 2007

10 CFR 50.54(f)

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

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

Response to Generic Letter 2007-01, "Inaccessible or Underground Power Cable Failures That Disable Accident Mitigation Systems or Cause Plant Transients" for Palisades Nuclear Plant

Dear Sir or Madam:

On February 7, 2007, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2007-01, "Inaccessible or Underground Power Cable Failures That Disable Accident Mitigation Systems or Cause Plant Transients." The NRC requested that specific information be provided within 90 days of the date of the GL.

Entergy Nuclear Operations, Inc. is providing the required response to GL 2007-01 in Enclosure 1 for Palisades Nuclear Plant.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

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I declare under penalty of perjury that the foregoing is true and correct. Executed on
May 4, 2007.



Christopher J. Schwarz
Site Vice President
Palisades Nuclear Plant

Enclosure (1)

CC . Regional Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
NRC Resident Inspector, Palisades USNRC

ENCLOSURE 1

RESPONSE TO GENERIC LETTER 2007-01

Nuclear Regulatory Commission (NRC) Requested Information

Within 90 days of the date of the generic letter, addressees are requested to submit the following information to NRC:

- (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 failures.*

Entergy Nuclear Operations, Inc. (ENO) Response

- (1) To date, PNP has experienced two cable failures within the scope of the Generic Letter. Details are provided in Attachment 1. In researching plant records for the requested information, ENO used the Nuclear Energy Institute interpretations of the information request provided in the NEI letter from J. H. Riley to NRC, "Interpretation of GL 2007-01, Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients," dated March 26, 2007, with the exceptions noted in NRC letter from M. J. Case to J. H. Riley of NEI, "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," dated April 13, 2007, to clarify the population of cables of interest at Palisades Nuclear Plant (PNP). Databases researched included the plant condition reporting databases, plant work order history database, Institute of Nuclear Power Operations databases, the plant maintenance rule database, and other plant-specific databases.

NRC Requested Information

- (2) *Describe inspection, testing and monitoring programs to detect the degradation of inaccessible or underground power cables that support [emergency diesel generators] EDGs, offsite power, [essential service water] ESW, service water, component cooling water and other systems that are within the scope of 10 CFR 50.65 (the Maintenance Rule).*

ENO Response

- (2) ENO does not have formal inspection, testing, and monitoring programs at PNP to detect the degradation of inaccessible or underground power cables that support EDGs, offsite power, service water (critical [essential] and non-critical), component cooling water and other systems that are within the scope of 10 CFR 50.65 (the Maintenance Rule). However,

ENCLOSURE 1

RESPONSE TO GENERIC LETTER 2007-01

ENO does periodically perform preventive maintenance activities for testing the insulation resistance (meggering) of inaccessible or underground power cables (480VAC and above) that support EDGs, offsite power, service water (critical [essential] and non-critical), component cooling water and other systems that are within the scope of the Maintenance Rule. During this search, underground cables were identified that have no preventive maintenance activities for periodic meggering. These cables were entered into the plant corrective action program to evaluate if periodic meggering should be performed as a good practice. ENO also periodically performs preventive maintenance activities to inspect manholes for dewatering at PNP. The corrective action program is also used to determine root cause and extent of conditions where deemed necessary. This program would be used for determining the need for and extent of any increased cable or manhole monitoring.

History of Inaccessible or Underground Power Cable Failures within the Scope of 10 CFR 50.65 for Palisades Nuclear Plant

Cable Type	Voltage Class	Manufacturer	Date of Failure / Service (Yrs.)	Type of Service	Root Cause
750 thousand circular mils, 3/conductor triplexed, butyl rubber insulation, polyvinyl chloride jacket, shielded (metal-sheathed).	5,000 volt rated, 4,160 volt service	General Electric	1/9/1986, ~18 years	Cable ID No. A2102/A21-X03/1, bus 1A feeder cable from startup power (bus 1A feeds two reactor coolant pumps and one condensate pump), underground conduit, normally energized.	The failure was in service. The root cause indicated that the fault was triggered by moisture seeping into the cable which caused gradual deterioration of the neutral sheath of the cable.
1,000 thousand circular mils, 3/conductor triplexed, ethylene propylene rubber insulation, flame resistant-chlorinated polyethylene jacket, shielded (with corrugated copper drain wires).	5,000 volt rated, 2,400 volt service	Anaconda	1/16/1996, ~6 years	Cable ID No. A1203/A12-X02/1, bus 1D feeder cable from safeguards power (bus 1D feeds safeguards equipment), underground duct bank conduit, normally energized.	The failure was in service. The root cause was attributed to manufacturing defects in the cable insulation. Localized foreign matter and voids present in the insulation acted as initiating points for water treeing degradation (water filled micro-voids that propagate over time in wet, energized cables).