FENOC
FirstEnergy Nuclear Operating Company

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May 7, 2007
L-07-055

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

Beaver Valley Power Station, Unit Nos. 1 and 2
Docket Nos. 50-334 and 50-412

Subject: **Response to NRC Generic Letter 2007-01**

On February 7, 2007, the NRC issued Generic Letter 2007-01, "Inaccessible or Underground Power Cable Failures That Disable Accident Mitigation Systems or Cause Plant Transients." The NRC issued the letter to inform licensees that the failure of certain power cables can affect the functionality of multiple accident mitigation systems or cause plant transients; inform licensees that in the absence of adequate monitoring of cable insulation, equipment could fail abruptly during service, causing plant transients or disabling accident mitigation systems; and ask licensees to provide information on the monitoring of inaccessible or underground electrical cables. The NRC requested that the information be provided within 90 days of the date of the Generic Letter.

The FirstEnergy Nuclear Operating Company (FENOC) is submitting the attached response to address the Generic Letter for the Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS). FENOC has concluded that BVPS is in compliance with the applicable regulatory requirements delineated in the Generic Letter as they apply to inaccessible or underground power cables.

There are no commitments included in this response.

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If there are any questions, or if additional information is required, please contact Mr. Henry L. Hegrat, Supervisor – FENOC Fleet Licensing, at (330) 374-3114.

I declare under the penalty of perjury that the foregoing is true and correct. Executed on May 07, 2007.

James H. Lash
Site Vice President

Attachment: Response to Generic Letter 2007-01, "Inaccessible or Underground Power Cable Failures That Disable Accident Mitigation Systems or Cause Plant Transients."

cc: NRC Project Manager – Beaver Valley Power Station
NRC Resident Inspector – Beaver Valley Power Station
NRC Regional Administrator – Region I
Mr. D. J. Allard, Director BRP/DEP
Mr. L. E. Ryan, BRP/DEP

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

The NRC issued Generic Letter 2007-01, "Inaccessible or Underground Power Cable Failures That Disable Accident Mitigation Systems or Cause Plant Transients," to inform licensees that the failure of certain power cables can affect the functionality of multiple accident mitigation systems or cause plant transients; inform licensees that in the absence of adequate monitoring of cable insulation, equipment could fail abruptly during service, causing plant transients or disabling accident mitigation systems; and ask licensees to provide information on the monitoring of inaccessible or underground electrical cables.

Each Generic Letter question is listed below, in bold, and is followed by the FENOC response for Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS).

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.**

   The maintenance history and failure trending programs, including the Corrective Action Program, were reviewed. No inaccessible or underground power cable failures within the scope of 10 CFR 50.65 were discovered during this review.

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).**

   Electrical power cables routed through underground ducts and electrical manholes are considered inaccessible. FENOC employs the following means of continuous and periodic monitoring of these inaccessible cables that are within the scope of 10 CFR 50.65 at BVPS.

   a. Visual examination of electrical cables routed through electrical manholes is performed on a periodic basis in accordance with station procedures. During the performance of manhole examinations, exposed electrical cables are inspected for swelling, cuts, scrapes or gouges. Deficiencies with cables examined during the performance of this procedure are documented in the

Corrective Action Program and forwarded to the Engineering Staff for evaluation and disposition as necessary.

b. Preventative Maintenance Procedures are presently in place to require electrical testing of all 4,160 VAC Motor Power Cables. These procedures require visual examinations, Polarization Index (PI) Testing, and megger testing to be performed on the associated power feeder cable. The PI and megger testing is performed from the associated 4,160 VAC switchgear breaker cubicle with the associated motor attached. The testing provides indication of cable integrity as well as providing information on the associated motor stator windings.

   A different Preventative Maintenance Procedure is performed on a periodic basis and requires the verification of the integrity of the Station Black Out (SBO) Cross Tie Cable, by performance of visual examination and megger testing.

c. The 480 VAC power cables do not undergo periodic testing but are powered from 480 VAC Unit Substations, which have a ground detection system with control room annunciation. This system provides continuous monitoring of 480 VAC system cables and alerts Control Room personnel of problems.

Testing required by the procedures detailed above as well as the continuous monitoring provided by the 480 VAC ground detection system, provide adequate validation of the condition of inaccessible and underground power cables at BVPS.

BVPS Unit 1 was placed in service in 1976, while BVPS Unit 2 was placed in service in 1987. The quality of cable construction, continued service without problem, satisfactory results of periodic inspection and testing and the ground detectior system provide a high degree of confidence for continued uninterrupted operation.