Exelon Generation
4300 Winfield Road
Warrenville, IL 60555

www.exeloncorp.com

Exelon Nuclear

RS-07-067
5928-07-20094
2130-07-20490

10 CFR 50.54(f)

May 7, 2007

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

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456 and STN 50-457

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN 50-454 and STN 50-455

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Dresden Nuclear Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Limerick Generating Station, Units 1 and 2
Facility Operating License Nos. NPF-39 and NPF-85
NRC Docket Nos. 50-352 and 50-353

Oyster Creek Nuclear Generating Station
Facility Operating License No. DPR-16
NRC Docket No. 50-219

Peach Bottom Atomic Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-277 and 50-278

Quad Cities Nuclear Power Station, Units 1 and 2
Renewed Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

Three Mile Island Nuclear Station, Unit 1
Facility Operating License No. DPR-50
NRC Docket No. 50-289

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

Reference: Letter from Michael J. Case (NRC) to Addressees, "NRC Generic Letter 2007-01: Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients," dated February 7, 2007

On February 7, 2007, the NRC issued Generic Letter (GL) 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients" (i.e., Reference). The GL requested that all holders of operating licenses submit a written response within 90 days in accordance with 10 CFR 50.54, "Conditions of licenses," paragraph (f). The GL requested the following information.

(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.

(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).

Attachment 1 provides the Exelon Generation Company, LLC (EGC) and AmerGen Energy Company, LLC (AmerGen) 90-day response to the requested information for Braidwood Station, Byron Station, Clinton Power Station, Dresden Nuclear Power Station, LaSalle County Station, Quad Cities Nuclear Power Station and Three Mile Island Nuclear Station Unit 1. Attachments 2 through 4 provide the responses for Limerick Generating Station, Oyster Creek Nuclear Generating Station, and Peach Bottom Atomic Power Station, respectively.

There are no regulatory commitments made in this letter. Should you have any questions concerning this letter, please contact Kenneth M. Nicely at (630) 657-2803.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 7th day of May 2007.

Respectfully,

Darin M. Benyak
Director, Licensing and Regulatory Affairs
Exelon Generation Company, LLC
AmerGen Energy Company, LLC

Attachments:

1. 90-Day Response to NRC Generic Letter 2007-01 for Braidwood Station, Byron Station, Clinton Power Station, Dresden Nuclear Power Station, LaSalle County Station, Three Mile Island Nuclear Station Unit 1, and Quad Cities Nuclear Power Station
2. 90-Day Response to NRC Generic Letter 2007-01 for Limerick Generating Station
3. 90-Day Response to NRC Generic Letter 2007-01 for Oyster Creek Nuclear Generating Station
4. 90-Day Response to NRC Generic Letter 2007-01 for Peach Bottom Atomic Power Station

cc:

Regional Administrator - NRC Region I
Regional Administrator - NRC Region III
NRC Senior Resident Inspector - Braidwood Station
NRC Senior Resident Inspector - Byron Station
NRC Senior Resident Inspector - Clinton Power Station
NRC Senior Resident Inspector - Dresden Nuclear Power Station
NRC Senior Resident Inspector - LaSalle County Station
NRC Senior Resident Inspector - Limerick Generating Station
NRC Senior Resident Inspector - Oyster Creek Nuclear Generating Station
NRC Senior Resident Inspector - Peach Bottom Atomic Power Station
NRC Senior Resident Inspector -Three Mile Island Nuclear Station, Unit 1
NRC Senior Resident Inspector - Quad Cities Nuclear Power Station

ATTACHMENT 1
90-Day Response to NRC Generic Letter 2007-01 for Braidwood Station, Byron Station, Clinton Power Station, Dresden Nuclear Power Station, LaSalle County Station, Quad Cities Nuclear Power Station and Three Mile Island Nuclear Station Unit 1

On February 7, 2007, the NRC issued Generic Letter (GL) 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients." The GL requested that all holders of operating licenses for nuclear power reactors submit a written response within 90 days in accordance with 10 CFR 50.54, "Conditions of licenses," paragraph (f). The 90-day response to the information requested by the NRC in GL 2007-01 is provided below for Braidwood Station, Byron Station, Clinton Power Station, Dresden Nuclear Power Station, LaSalle County Station, Quad Cities Nuclear Power Station and Three Mile Island Nuclear Station Unit 1.

NRC Request 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.

Response

A review has been completed and no history of failures of inaccessible or underground power cables that are within the scope of 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," has been identified. This review examined the plant corrective action program, Maintenance Rule or other databases, maintenance records, interviews with cognizant personnel, and a review of the circuit and raceway schedules to identify power cable failures. The scope of the review included alternating current power distribution cables with voltages from 480 VAC to 15,000 VAC. This represents our best effort in that data of this nature was not necessarily recorded in a means that was conducive to identifying cable failures.

NRC Request 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).

Response

The Exelon Nuclear Cable Condition Monitoring Program is controlled under procedure ER-AA-3003, "Cable Condition Monitoring Program," which was issued in January 2007. This program is consistent with industry practices and recommendations as provided in Nuclear Energy Institute (NEI) 06-05, "Medium Voltage Underground Cable White Paper," dated April 2006. The program consists of a two-phase approach to medium voltage cable testing.

The first phase of the program is referred to as screening, and takes advantage of motor testing that is typically performed from the switchgear. Since the motor testing is performed from the switchgear, the motor feeder cables are tested along with the motors. This testing is performed with an appropriate motor analyzer and includes insulation resistance, Polarization Index, and Step Voltage HiPot Testing. This testing is done on a representative population of station

cables. It should be noted that for Quad Cities Station and Three Mile Island, station procedures or management direction currently limit this testing to insulation resistance measurement (i.e., megger).

If the results of screening indicate problems with the cables, then an appropriate diagnostic cable test program is implemented. The diagnostic test methodology will be selected based upon the nature of the identified cable degradation. The diagnostic cable testing will be applied to all cables in the suspect population. Note that a sizeable population of the Exelon Nuclear cables is unshielded and, as such, the testing methodologies identified in the GL (i.e., partial discharge, time domain reflectometry, dissipation factor, and very low frequency alternating current) would not be applicable.

In addition to the screening/diagnostic aspects of the Cable Condition Monitoring Program, Dresden has also made a commitment as part of license renewal to cable testing programs for a population of inaccessible medium voltage cables.

The Exelon Nuclear Cable Condition Monitoring Program does not monitor low voltage inaccessible cables for degradation. As evidenced by the stations' failure history, there is no indication that there are issues associated with low voltage inaccessible power cables.

Dresden and Quad Cities have a commitment under License Renewal regarding low voltage cables with respect to exposure to external stressors. This commitment requires the identification of any adverse localized environment caused by heat or radiation in critical plant areas. Cables would then be inspected in these areas for visible degradation by the identified adverse environment. The inspections will be completed in accordance with the timing set forth in the License Renewal commitment.

In addition, Dresden and Quad Cities have a commitment under their Environmental Qualification (EQ) Programs regarding butyl rubber cables. This commitment requires a periodic inspection surveillance program on a selected sample of these cables in various harsh environmental zones in the reactor buildings to maintain their environmental qualification status. This includes both physical inspections and insulation resistance measurements. The sample size includes both power and control cables.

Braidwood Station, Byron Station, Clinton Power Station, Dresden Nuclear Power Station, LaSalle County Station, Quad Cities Nuclear Power Station and Three Mile Island Nuclear Station Unit 1 have had no history of failures of inaccessible or underground power cables within the scope of 10 CFR 50.65. As such, these stations are using the screening methodology described above to assess the condition of a representative population of medium voltage cables.

On February 7, 2007, the NRC issued Generic Letter (GL) 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients." The GL requested that all holders of operating licenses for nuclear power reactors submit a written response within 90 days in accordance with 10 CFR 50.54, "Conditions of licenses," paragraph (f). The 90-day response to the information requested by the NRC in GL 2007-01 is provided below for Limerick Generating Station.

NRC Request 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.

Response

A review has been completed to identify failures of inaccessible or underground power cables that are within the scope of 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants." This review examined the plant corrective action program, Maintenance Rule or other databases, maintenance records, interviews with cognizant personnel, and a review of the circuit and raceway schedules to identify power cable failures. The scope of the review included alternating current power distribution cables with voltages from 480 VAC to 15,000 VAC. This represents our best effort in that data of this nature was not necessarily recorded in a means that was conducive to identifying cable failures. The results of this review are provided below:

Cable Type	Voltage Class	Cable Manufacturer	Date of Failure/ Years of Service	Type of Service	Root Cause
500 kcmil, Single, EPR, UniShield	15kV/13.8kV	Anaconda-Ericcson Cable	1995/15 years	Feed to Circulating Water Pump 1A-P501, duct, normally energized	Failed inservice, manufacturing defect
500 kcmil, Single, EPR, UniShield	15kV/13.8kV	Anaconda-Ericcson Cable	1995/15 years	Feed to Circulating Water Pump 1B-P501, duct, normally energized	Failed inservice, manufacturing defect
500 kcmil, Single, EPR, UniShield	15kV/13.8kV	Anaconda-Ericcson Cable	1995/15 years	Feed to Circulating Water Pump 1C-P501, duct, normally energized	Failed during test, manufacturing defect

Cable Type	Voltage Class	Cable Manufacturer	Date of Failure/ Years of Service	Type of Service	Root Cause
500 kcmil, Single, EPR, UniShield	15kV/13.8kV	Anaconda-Ericcson Cable	2000/20 years	Feed to Circulating Water Pump 1A-P501, duct, normally energized	Failed during test, manufacturing defect
350 kcmil, Single, EPR, UniShield	15kV/13.8kV	Anaconda-Ericcson Cable	2005/25 years	Feed to 222 Transformer, duct, normally energized	Failed during test, manufacturing defect

NRC Request 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).

Response

The Exelon Nuclear Cable Condition Monitoring Program is controlled under procedure ER-AA-3003, "Cable Condition Monitoring Program," which was issued in January 2007. This program is consistent with industry practices and recommendations as provided in Nuclear Energy Institute (NEI) 06-05, "Medium Voltage Underground Cable White Paper," dated April 2006. The program consists of a two-phase approach to medium voltage cable testing.

The first phase of the program is referred to as screening, and takes advantage of motor testing that is typically performed from the switchgear. Since the motor testing is performed from the switchgear, the motor feeder cables are tested along with the motors. This testing is performed with an appropriate motor analyzer and includes insulation resistance, Polarization Index, and Step Voltage HiPot Testing. This testing is done on a representative population of station cables.

If the results of screening indicate problems with the cables, then an appropriate diagnostic cable test program is implemented. The diagnostic test methodology will be selected based upon the nature of the identified cable degradation. The diagnostic cable testing will be applied to all cables in the suspect population.

The Exelon Nuclear Cable Condition Monitoring Program does not monitor low voltage inaccessible cables for degradation. As evidenced by the station's failure history, there is no indication that there are issues associated with low voltage inaccessible power cables.

Limerick has a history of medium voltage cable failures in a specific population of the originally installed cables. These failures have been attributed to voids and impurities in the Ethylene Propylene Rubber (EPR) insulation coupled with operation in a wet environment. The inservice

failures have all been in 13.8kV applications associated with the non-safety related circulating water pump motor feeds. As a result, potentially wetted cables energized at 13.8kV are now being tested utilizing very low frequency (VLF) diagnostic testing.

ATTACHMENT 3
90-Day Response to NRC Generic Letter 2007-01 for Oyster Creek Nuclear Generating Station

On February 7, 2007, the NRC issued Generic Letter (GL) 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients." The GL requested that all holders of operating licenses for nuclear power reactors submit a written response within 90 days in accordance with 10 CFR 50.54, "Conditions of licenses," paragraph (f). The 90-day response to the information requested by the NRC in GL 2007-01 is provided below for Oyster Creek Nuclear Generating Station.

NRC Request 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.

Response

A review has been completed to identify failures of inaccessible or underground power cables that are within the scope of 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants." This review examined the plant corrective action program, maintenance records, interviews with cognizant personnel, and a review of the circuit and raceway schedules to identify power cable failures. The scope of the review included alternating current power distribution cables with voltages from 480 VAC to 15,000 VAC. This represents our best effort in that data of this nature was not necessarily recorded in a means that was conducive to identifying cable failures. The results of this review are provided below.

As a result of the early cable failures, Oyster Creek embarked upon a cable-testing program (Step Voltage HiPot Testing). Testing over a period of time showed increasing amounts of leakage current in several cables. Twenty-six additional cables were replaced due to indications from the test program; these cables were replaced prior to failure. Additionally, due to recent failures in a population of Anaconda UniShield cables, eight cables were replaced as a possible extent of condition.

Cable Type	Voltage Class	Cable Manufacturer	Date of Failure/ Years of Service	Type of Service	Root Cause
500 kcmil, Single, EPR, UniShield	5kV/4160V	Cablec	1998/7 years	Feedwater A, underground conduit, energized continuously	Water intrusion
4/0 AWG Single, EPR, UniShield	5kV/4160V	Anaconda	1997/13 years	Reactor Recirc Motor-Generator Set Motor E, underground conduit, energized continuously	Water intrusion

Cable Type	Voltage Class	Cable Manufacturer	Date of Failure/ Years of Service	Type of Service	Root Cause
2/0 AWG Single, XLPE, Shielded, Metallic	5kV/4160V	GE	1988/19 years	Unit Substation 1A3, underground conduit, energized continuously	Manufacturing defect
500 kcmil, Single, EPR, UniShield	5kV/4160V	Anaconda	1990/6 years	Unit Substation 1B2, underground conduit, energized continuously	Manufacturing defect (voids)
500 kcmil, Single, EPR, UniShield	5kV/4160V	Anaconda	2001/5 years	Unit Substation 1B2, underground conduit, energized continuously	Manufacturing defect (voids)
500 kcmil, Single, XLPE, Shielded, Metallic	5kV/4160V	GE	1975/6 years	EDG-1, underground conduit, energized continuously	Lightning surge
500 kcmil, Single, EPR, UniShield	5kV/4160V	Anaconda	1983/6 years	EDG-1, underground conduit, energized continuously	Manufacturing defect (voids)
500 kcmil, Single, EPR, UniShield	5kV/4160V	Anaconda	2003/19 years	EDG-1, underground conduit, energized continuously	Manufacturing defects and water intrusion
500 kcmil, Single, XLPE, Shielded, Metallic	5kV/4160V	GE	1977/8 years	EDG-2, underground conduit, energized continuously	Lightning surge
500 kcmil, Single, EPR, UniShield	5kV/4160V	Anaconda	1988/11 years	EDG-2, underground conduit, energized continuously	Manufacturing defect (voids)

Cable Type	Voltage Class	Cable Manufacturer	Date of Failure/ Years of Service	Type of Service	Root Cause
500 kcmil, Single, EPR, UniShield	5kV/4160V	Anaconda	1996/8 years (second feed)	EDG-2, underground conduit, energized continuously	Water intrusion
250 kcmil, Single, EPR, UniShield	5kV/4160V	Anaconda	2007/14 years	Dilution Pumps, underground ducts, energized continuously	Not determined

NRC Request 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).

Response

The Exelon Nuclear Cable Condition Monitoring Program is controlled under procedure ER-AA-3003, "Cable Condition Monitoring Program," which was issued in January 2007. This program is consistent with industry practices and recommendations as provided in Nuclear Energy Institute (NEI) 06-05, "Medium Voltage Underground Cable White Paper," dated April 2006. The program consists of a two-phase approach to medium voltage cable testing.

The first phase of the program is referred to as screening, and takes advantage of motor testing that is typically performed from the switchgear. Since the motor testing is performed from the switchgear, the motor feeder cables are tested along with the motors. This testing is performed with an appropriate motor analyzer and includes insulation resistance, Polarization Index, and Step Voltage HiPot Testing. This testing is done on a representative population of station cables.

If the results of screening indicate problems with the cables, then an appropriate diagnostic cable test program is implemented. The diagnostic test methodology will be selected based upon the nature of the identified cable degradation. The diagnostic cable testing will be applied to all cables in the suspect population. Note that some of the Oyster Creek cables are unshielded and, as such, the testing methodologies identified in the GL (i.e., partial discharge, time domain reflectometry, dissipation factor, and very low frequency alternating current) would not be applicable.

In addition to the screening/diagnostic aspects of the Cable Condition Monitoring Program, Oyster Creek has made a commitment as part of license renewal to examine inaccessible

medium voltage cables. The existing cable testing program will continue to be used to meet that commitment.

The Exelon Nuclear Cable Condition Monitoring Program does not monitor low voltage inaccessible cables for degradation. As evidenced by the station's failure history, there is no indication that there are issues associated with low voltage inaccessible power cables.

Oyster Creek has had 4160V cable failures due to various mechanisms. During early operations (i.e., 1970-1980), EDG cable failures occurred due to a specific lightning surge and some cable design defects. A large number of subsequent cable failures or problems were associated with water entering conduit and cable manufactured with voids or defects in the primary insulation. As a result of the EDG cable failures in the 1970s, a program to periodically test 5KV cables was instituted in 1977. The program used DC Step Voltage HiPot tests to determine the integrity and quality of the 5KV feeder cables and equipment. Later in the 1980s, DC testing was supplemented by AC power factor tests (i.e., Doble test) for specific cases where DC tests could damage connected equipment (e.g., liquid filled transformers). In recent years, Oyster Creek has tested, on a case-by-case basis, circuits using on-line partial discharge testing. Oyster Creek is in the process of implementing the use of on-line partial discharge testing as a primary means of periodically testing inaccessible medium voltage cables.

On February 7, 2007, the NRC issued Generic Letter (GL) 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients." The GL requested that all holders of operating licenses for nuclear power reactors submit a written response within 90 days in accordance with 10 CFR 50.54, "Conditions of licenses," paragraph (f). The 90-day response to the information requested by the NRC in GL 2007-01 is provided below for Peach Bottom Atomic Power Station.

NRC Request 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.

Response

A review has been completed to identify failures of inaccessible or underground power cables that are within the scope of 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants." This review examined the plant corrective action program, Maintenance Rule or other databases, maintenance records, interviews with cognizant personnel, and a review of the circuit and raceway schedules to identify power cable failures. The scope of the review included alternating current power distribution cables with voltages from 480 VAC to 33,000 VAC. This represents our best effort in that data of this nature was not necessarily recorded in a means that was conducive to identifying cable failures. The results of this review are provided below:

Cable Type	Voltage Class	Cable Manufacturer	Date of Failure/ Years of Service	Type of Service	Root Cause
Unknown specs	35kV/33kV	Unknown	2001/7 years	SBO 191-00 Line (remote end), energized, direct buried	Fault current from aerial line hit bollard adjacent to cable trench eroding insulation. Failure occurred about 1 month later.
1000 kcmil, AL, Single, XLPE, Shielded	5kV/4160kV	*	1997/24 years	3B Recirc Motor, wet, normally energized, underground duct	Not determined

Cable Type	Voltage Class	Cable Manufacturer	Date of Failure/ Years of Service	Type of Service	Root Cause
1000 kcmil, Single, XLPE, Shielded	5kV/4.2kV	Reynolds Metal	1991/18 years	2EA Transformer, wet, energized, underground duct	Treeing
Single, XLPE, Shielded	15kV/13.8 kV	*	1990/17 years	3A Condensate Pump, wet, energized, underground duct	No formal analysis performed
XLPE, Other specs unknown, Shielded	Unknown, 15kV/13.8 kV or 15kV/4160kV	*	1989/16 years	3C Circulating Water Pump, wet, energized, underground duct	No formal analysis performed
250 kcmil, AL, Single, XLPE, Shielded	5kV/4160kV	*	1985/12 years	A ESW Pump, wet, normally de-energized, underground duct	No formal analysis performed
750 kcmil, Single, XLPE, Shielded	5kV/4160kV	*	1992/19 years	3D HPSW Pump, wet, normally de-energized, underground duct	Failed during test, manufacturing defect

* The circuit and raceway schedules do not provide manufacturer information; it would be necessary to pull original plant procurement information from the archives in an attempt to identify the manufacturer of these cables. Based upon discussions with cognizant personnel, the original plant medium voltage cable is most likely manufactured by Reynolds Metal.

NRC Request 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).

Response

Peach Bottom has had failures of medium voltage Cross Linked PolyEthylene (XLPE) cables in wet environments. The majority of these failures were in continuously energized cables. To mitigate future cable failures in wet environments, several susceptible medium voltage XLPE cables were replaced with either tree resistant XLPE or Ethylene Propylene Rubber (EPR)

cables. Normally de-energized circuits, and certain low-risk continuously energized circuits, have retained the original XLPE cables.

The Exelon Nuclear Cable Condition Monitoring Program is controlled under procedure ER-AA-3003, "Cable Condition Monitoring Program," which was issued in January 2007. This program is consistent with industry practices and recommendations as provided in Nuclear Energy Institute (NEI) 06-05, "Medium Voltage Underground Cable White Paper," dated April 2006. The program consists of a two-phase approach to medium voltage cable testing.

The first phase of the program is referred to as screening, and takes advantage of motor testing that is typically performed from the switchgear. It should be noted that for Peach Bottom, station procedures currently limit this testing to insulation resistance measurement (i.e., megger, polarization index).

Peach Bottom's capability to perform motor testing from the switchgear is restricted due to a number of factors. The non-safety related motors supplied from the Unit Auxiliary buses are not subject to motor testing from the switchgear since the bus voltage is 13KV and the motors are supplied with 2.4/4 KV through intervening transformers. The inaccessible cables, in potentially wet environments, supplying medium voltage safety related motors are also excluded from Step Voltage Hi Pot testing from the switchgear since the majority of these cables are original XLPE. The second phase of the program uses diagnostic test methodology, which is in the early stages of development at Peach Bottom to support License Renewal cable testing commitments.

Peach Bottom has a commitment under License Renewal to perform cable testing for a representative sample population of inaccessible medium voltage cables. The cables identified as representative include XLPE, tree resistant XLPE, and EPR cables. The testing will be completed in accordance with the timing set forth in the License Renewal commitment.

The Exelon Nuclear Cable Condition Monitoring Program does not monitor low voltage inaccessible cables for degradation. As evidenced by the station's failure history, there is no indication that there are issues associated with low voltage inaccessible power cables.

In addition, Peach Bottom has a commitment under License Renewal regarding low voltage cables with respect to exposure to external stressors. This commitment requires the identification of any adverse localized environment caused by heat or radiation in critical plant areas. Cables would then be inspected in these areas for visible degradation by the identified adverse environment. The inspections will be completed in accordance with the timing set forth in the License Renewal commitment.