AmerGen Energy Company, LLC
200 Exelon Way
Kennett Square, PA 19348

www.exeloncorp.com

AmerGen SM
An Exelon Company

10 CFR 20.1003

April 18, 2006

RS-06-051
5928-06-20388
2130-06-20262

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

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 Station, Units 1, 2 and 3
Facility Operating License No. DPR-2
Renewed Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-10, 50-237, 50-249 and 72-37

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. STN 50-373 and STN 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 Generating Station
Facility Operating License No. DPR-16
NRC Docket Nos. 50-219 and 72-15

Peach Bottom Atomic Power Station, Units 1, 2 and 3
Facility Operating License No. DPR-12
Renewed Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-171, 50-277, 50-278 and 72-1027

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

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

Subject: Response To Request For Additional Information - Application to Use Weighting Factors for External Exposure (TAC Nos. MC9247-MC9263)

Reference: (1) Letter from P. B. Cowan (Exelon/AmerGen) to USNRC, "Application to Use Weighting Factors for External Exposure," dated December 14, 2005

This letter provides additional information in response to the NRC draft request for additional information received via NRC email, dated January 25, 2006, regarding the Exelon Generation Company, LLC (Exelon) and AmerGen Energy Company, LLC (AmerGen) application to use weighting factors for calculating external whole body dose, pursuant to 10 CFR 20.1003. The Exelon/AmerGen application was previously provided in Reference 1. Enclosed is a detailed response to the NRC request for additional information.

Reference 1 above, originally requested NRC approval of this application by February 15, 2006 in order to support use during the Spring 2006 refueling outages. This approval date is no longer needed to support Exelon/AmerGen refueling outages occurring in early Spring 2006. Although not directly required for any outage implementation, receipt of NRC approval by August 2006 would enable use of the weighting factors for the Fall 2006 refueling outages.

If any additional information is needed, please contact Mr. David J. Distel at (610) 765-5517.

Sincerely,

D.J.D

Pamela B. Cowan
Director – Licensing & Regulatory Affairs
Exelon Generation Company, LLC
AmerGen Energy Company, LLC

Enclosures: (1) Response to Request for Additional Information

cc: Regional Administrator - NRC Region I
Regional Administrator - NRC Region III
NRC Project Manager, NRR - Braidwood Station
NRC Project Manager, NRR - Byron Station
NRC Project Manager, NRR - Clinton Power Station
NRC Project Manager, NRR - Dresden Nuclear Power Station
NRC Project Manager, NRR - LaSalle County Station
NRC Project Manager, NRR - Limerick Generating Station
NRC Project Manager, NRR - Oyster Creek Generating Station
NRC Project Manager, NRR - Peach Bottom Atomic Power Station
NRC Project Manager, NRR - TMI Unit 1
NRC Project Manager, NRR - Quad Cities Nuclear Power Station
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 Generating Station
NRC Senior Resident Inspector - Peach Bottom Atomic Power Station
NRC Senior Resident Inspector - TMI Unit 1
NRC Senior Resident Inspector - Quad Cities Nuclear Power Station
Illinois Emergency Management Agency - Division of Nuclear Safety
Director, Bureau of Radiation Protection - Pennsylvania Department of Environmental Resources
Director, Bureau of Nuclear Engineering, New Jersey Department of Environmental Protection
Chairman, Board of County Commissioners of Dauphin County, PA
Chairman, Board of Supervisors of Londonderry Township, PA
Mayor of Lacey Township, Forked River, NJ
R. I. McLean, State of Maryland
R. R. Janati, Commonwealth of Pennsylvania
K. N. Jabbour, NRC Project Manager, NRR - (Exelon/AmerGen Fleet)

ENCLOSURE 1

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

1. NRC Question

Section 2.4 of the enclosure, "DOSIMETER SELECTION AND PLACEMENT," states that "Exelon/AmerGen will use the criteria in the current Radiation Protection Procedure RP-AA-210, "Dosimetry Issue, Usage and Control" for determining dosimeter selection and placement. Later, the same section lists the criteria (e.g., greater than 30 percent of the expected dose equivalent and the potential to exceed 100 mrem) for multiple dosimetry. Please state whether these criteria are specifically listed in Exelon/AmerGen's procedure RP-AA-210.

Response

These criteria are specifically listed in the Exelon/AmerGen Radiation Protection Procedure RP-AA-210, Section 4.5, Evaluation for Use of Multiple Dosimetry, Step 4.5.1. This procedure establishes the following criteria:

1. The radiation dose to any portion of the whole body has the potential to be greater than 30% of the expected dose equivalent at the reference dosimeter location on the body, **and**

2. The dose equivalent for the evolution has the potential to exceed 100 mrem when a significant component of the effective dose equivalent comes from a non-uniform field, **or**

3. When specified by Radiation Protection Supervision."

2. NRC Question

Please discuss whether the multiple dosimetry criteria of Section 2.4, discussed in Exelon/AmerGen's Radiation Protection Procedure RP-AA-210, are consistent with the criteria for dosimeter selection and placement found in the current NRC inspection procedures.

Response

The criteria in the Exelon/AmerGen Radiation Protection Procedure RP-AA-210 are consistent with ANSI/HPS N13.41-1997, "Criteria for Performing Multiple Dosimetry," in lieu of NRC inspection procedure criteria. Section 4 of the ANSI/HPS N13.41-1997 Standard states: "Therefore, multiple dosimeters, if their use has been deemed appropriate, should be used for each individual whose potential exposure to radiation during a specific time period or activity satisfies the following two conditions:**

(1) The radiation dose to any portion of the body has the potential to exceed 30% of the expected dose equivalent at the reference dosimeter location on the body; and

(2) The dose equivalent has the potential to exceed 10% of the limiting value when a significant component of the effective dose equivalent comes from a non-uniform radiation field.

Exelon/AmerGen Radiation Protection Procedure RP-AA-210, Step 4.5.1, Criterion 1, states that multiple dosimetry is used when the radiation dose to any portion of the whole body has the potential to be greater than 30% of the expected dose equivalent at the reference dosimeter location on the body. This criterion is fully consistent with Item 1 in the ANSI/HPS N13.41-1997 Standard. Exelon/AmerGen Procedure RP-AA-210, Step 4.5.1, Criterion 2 states that multiple dosimetry is used when the dose equivalent for the evolution has the potential to exceed 100 mrem when a significant component of the effective dose equivalent comes from a non-uniform field. The Exelon/AmerGen threshold of 100 mrem is based on implementation of Item 2 from the ANSI/HPS N13.41-1997 Standard, and utilizes a limiting value of 1000 mrem. Based on this limiting value, the 10% criterion equates to the 100 mrem threshold. Therefore, the Exelon/AmerGen criteria for evaluating the use of multiple dosimetry, as specified in Radiation Protection Procedure RP-AA-210, Step 4.5.1, is fully consistent with the ANSI/HPS N13.41-1997, and complies with the requirements of 10 CFR 20.1201(c).

3. NRC Question

Section 2.6 of the enclosure, "CONCLUSION," states that " The proposed method will monitor the part of the whole body expected to receive the highest dose using the criteria for dosimeter selection and placement found in current NRC inspection procedures." Please state the specific NRC inspection procedures that Exelon/AmerGen proposes to utilize for monitoring the part of the whole body expected to receive the highest dose.

Response

The intent of this statement in Section 2.6 of the enclosure is that the Exelon/AmerGen Radiation Protection Procedure, RP-AA-210, method and criteria for evaluating dosimeter selection and placement provides reasonable evaluation criteria and thresholds, and fully complies with the requirements of 10 CFR 20.1201(c), as described above in response to Question No. 1.