March 5, 2006

LICENSEE: AmerGen Energy Company, LLC

FACILITY: Oyster Creek Nuclear Generating Station

SUBJECT: TELECOMMUNICATION WITH AMERGEN ENERGY COMPANY, LLC, TO DISCUSS REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE NRC STAFF'S REVIEW OF THE SEVERE ACCIDENT MITIGATION ALTERNATIVE (SAMA) ANALYSIS IN THE OYSTER CREEK LICENSE RENEWAL APPLICATION (TAC NO. MC7625)

On November 9, 2005, the U.S. Nuclear Regulatory Commission (NRC) staff formally sent a request for additional information (RAI) on Severe Accident Mitigation Alternatives (SAMA) to AmerGen Energy Company, LLC (AmerGen), regarding the environmental review of the application for the license renewal of Oyster Creek Nuclear Generating Station (OCNGS). AmerGen formally replied to the RAI in a letter dated January 9, 2006. After a review of the responses provided by AmerGen in the January 9, 2006 letter, the NRC staff and its contractor from Information Systems Laboratory (ISL) determined that some additional clarification was necessary for several of the responses.

On January 31, 2006, the NRC staff and its contractor conducted a conference call (teleconference) with representatives from AmerGen and Erin Engineering and Research, Inc. (ERIN) to discuss AmerGen's RAI responses, dated January 9, 2006, for the Oyster Creek Nuclear Generating Station (OCNGS) license renewal (ADAMS Accession No. ML053130387).

Enclosure 1 contains a listing of the teleconference participants. Enclosure 2 contains a list of questions and requests for clarification on specific responses contained in the January 9, 2006, RAI response, that were discussed during the January 31, 2006, teleconference.

No staff decisions were made during the teleconference. AmerGen plans to provide written responses to the requests for clarification.

/RA/
Michael T. Masnik, Senior Project Manager
Environmental Branch B
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosure:
As stated

cc w/encls: See next page

March 5, 2006

LICENSEE: AmerGen Energy Company, LLC

FACILITY: Oyster Creek Nuclear Generating Station

SUBJECT: TELECOMMUNICATION WITH AMERGEN ENERGY COMPANY, LLC, TO DISCUSS REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE NRC STAFF'S REVIEW OF THE SEVERE ACCIDENT MITIGATION ALTERNATIVE (SAMA) ANALYSIS IN THE OYSTER CREEK LICENSE RENEWAL APPLICATION.(TAC NO. MC7625)

On November 9, 2005, the U.S. Nuclear Regulatory Commission (NRC) staff formally sent a request for additional information (RAI) on Severe Accident Mitigation Alternatives (SAMA) to AmerGen, regarding the environmental review of the application for the license renewal of Oyster Creek Nuclear Generating Station (OCNGS). AmerGen formally replied to the RAI in a letter dated January 9, 2006. After a review of the responses provided by AmerGen in the January 9, 2006 letter, the NRC staff and its contractor from Information Systems Laboratory (ISL) determined that some additional clarification was necessary for several of the responses.

On January 31, 2006, the NRC staff and its contractor conducted a conference call (teleconference) with representatives from AmerGen Energy Company, LLC (AmerGen) and Erin Engineering and Research, Inc. (ERIN) to discuss AmerGen's RAI responses, dated January 9, 2006, for the Oyster Creek Nuclear Generating Station (OCNGS) license renewal (ADAMS Accession No. ML053130387).

Enclosure 1 contains a listing of the teleconference participants. Enclosure 2 contains a list of questions and requests for clarification on specific responses contained in the January 9, 2006, RAI response, that were discussed during the January 31, 2006, teleconference.

No staff decisions were made during the teleconference. AmerGen plans to provide written responses to the requests for clarification.

/RA/
Michael T. Masnik, Senior Project Manager
Environmental Branch B
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosure:
As stated

cc w/encls: See next page

DISTRIBUTION: See next page **ADAMS Accession Number: ML060670480**

DOCUMENT NAME: E:\Filenet\ML060670480.wpd

OFFICE	GS:REBB:DLR	LA:DLR: REBB	PM:DLR: REBB	SC:DLR: REBB
NAME	EKeto	YEdmonds	MMasnik	RFranovich
DATE	3/1/06	3/1/06	3/2/06	3/5/06

OFFICIAL RECORD COPY

Note to: Licensee: AmerGen Energy Company, LLC, Facility: Oyster Creek Nuclear Generating Plant, from Michael Masnik, Dated: March 5, 2006

SUBJECT: SUMMARY OF CONFERENCE CALL WITH AMERGEN ENERGY COMPANY, LLC (AMERGEN) TO DISCUSS AMERGEN'S SEVERE ACCIDENT MITIGATION ALTERNATIVE (SAMA) RESPONSES DATED JANUARY 9, 2006 FOR THE OYSTER CREEK NUCLEAR GENERATING STATION (TAC NO. MC7625)

DISTRIBUTION:
REBB/Environmental R/F
L. Gerke
P. T. Kuo/F. Gillespie, (RidsNrrDlr)
R. Franovich, (RidsNrrDlrRebb)
H. Nash
R. Bellamy, RI
A. Hodgdon, OGC, (RidsOgcMailCenter)
R. Cureton, RI
M. Modes, RI
B. Pham
E. Miller, DLPM
J. Lilliendahl, RI
K. LaGory (ANL)
F. Monette (ANL)
D. Ashley
R. Bores, RI
M. Ferdas RI
D. Screnci, RI
N. Sheehan RI

LIST OF PARTICIPANTS FOR TELEPHONE CONFERENCE CALL
TO DISCUSS THE SEVERE ACCIDENT
MITIGATION ALTERNATIVES (SAMAS)

JANUARY 31, 2006

Participants	Affiliations
Michael Masnik	U.S. Nuclear Regulatory Commission (NRC)
Tom Quintenz	AmerGen Energy Company, LLC (AmerGen)
Mike Godknecht	AmerGen
Bill Maher	AmerGen/Erin Engineering and Research, Inc. (ERIN)
Ed Burns	ERIN
Kiang Lee	ERIN
Kim Green	Information Systems Laboratory (ISL)
Bob Schmidt	ISL

Enclosure 1

Clarifications Needed in Oyster Creek Severe Accident Mitigation Alternative (SAMA) Request for Additional Information (RAI) Responses

RAI 1c

The response to this RAI indicates that the results of the 2004A Probabilistic Risk Assessment (PRA) model were "re-reviewed to establish the number of gaps that remained following the update" and "the self-assessment performed for the 2004A model and documentation also applies to 2004B". Was the 2004A analysis subjected to a complete self-assessment or was the focus of the re-review limited to those gaps found in the 2001 PRA? Of concern is the completeness/applicability of the self-assessment of the 2001 PRA relative to the 2004A model considering the extensive changes from the 2001 model to the 2004 model not the least of which is the change from support state (RISKMAN) modeling to linked fault tree (CAFTA) modeling.

RAI 1e

It is implied in the response to this RAI that the self-assessment discussed in the response to RAI 1c included reviewing the Level 2 PRA. The self-assessment, however, as described, started with the 2001 PRA and this PRA did not include the complete Level 2 model. Please describe in more detail the review of the current Level 2 model.

RAI 2c

1. The results of the Fire PRA (FPRA) Reassessment gives a core damage frequency (CDF) for the two dominant fire areas in the individual plant examination of external events (IPEEE) of 3.5E-06/yr vs the IPEEE value of 1.37E-05/yr. The evaluation of SAMA 125 gives a CDF for these two areas of 2.11E-05/yr. Please explain the very large reduction from the SAMA 125 evaluation.

2. Please provide a summary description of the FPRA Reassessment including: overall methodology, scope, reviews and status.

3. The results of the FPRA indicate a significant reduction in fire risk below that utilized in the evaluations for SAMA 125. Please discuss the impact of the revised fire risk on the SAMA 125 evaluations.

4. Footnote 2 to Table 2-2 discusses cable fire scenario U and indicates that review of existing mitigating measures reduces the CDF. Please clarify what these measures are.

5. Fire Area OB-FZ-4, which was the dominant contributor in the IPEEE, is now the seventh ranked contributor to fire CDF. Please discuss potential for SAMAs for this zone as is done for the other top ranked fire zones.

RAI 4e

Based on the response, the reason for the larger reduction in CDF indicated for SAMA 125A than for SAMA 109 is that this SAMA has a much more significant impact on the fire CDF than on the internal events CDF. If the impact of the SAMA on internal events CDF is a 15.6% reduction, the reduction in the fire CDF must be approximately 72% to give the final SAMA 125A result.

SAMA 125A CDF = Internal events contribution + Fire events contribution

= (1- 0.156) * 1.05E-05 + (1 - 0.725) * 2.11E-05
= 0.886E-05 + 0.580E-05 = 1.47E-05

The latter number is equal to the SAMA frequency given on Page F-206. This result is contrary to the general argument that the fire risk is only partially influenced by internal events SAMAs.

As it turns out, SAMA 109 is cost beneficial based on the assumption that the fire risk is impacted to the same degree as the internal event risk is impacted. If it had not been true then the SAMA 125A result might have changed this conclusion. Are there any other SAMAs where the impact on fire risk could be more significant than on the internal events risk and therefore change the cost benefit result? Please discuss.

RAI 4f

The analysis of Net Value in Table 4F-1 makes use of averted cost calculated on two different bases. For SAMA 109 it is based on the internal events analysis and a factor of 2 to account for external events; for SAMAs 125B and 125C it is based on the preliminary fire risk results. Also, rather than providing the net values for implementing the SAMAs individually, the net value provided for SAMA 125B reflects the combined benefit of SAMAs 125A and 125B, and the net value provided for SAMA 125C reflects the combined benefit of SAMAs 125A, 125B, and 125C. The results provided do not appear to be the most appropriate estimates to use. Please discuss.

RAI 4h

Based on the wind speed probabilities cited in RAI 4h, the probability curve would shift upward by about one to two orders of magnitude at low and high wind speeds. This would increase both the baseline risk contribution from high winds and the risk reduction from each SAMA. Since the slope of the curve is similar to that on which the SAMA evaluation was based, it was expected that this shift would increase the net value of these SAMAs by one to orders of magnitude. While, as described in the RAI response, the probability curve on which the SAMA analysis is based is higher than used in the IPEEE, it is still lower than suggested in the staff's review of the IPEEE (by about one decade). Further, the reanalysis described in the RAI response did not change the base line risk to be more consistent with the higher frequency of low wind speeds suggested by the staff's IPEEE comments. Use of the higher frequencies indicates an 85 MPH wind speed frequency of 1 to 2 E-02/yr, implying that there may be some probability of Combustion Turbine or Fire Pump House failure in the severe weather category of Loss of Offsite Power events. The net values based on the "NRC Recommended Revised Evaluation" may therefore be underestimated. Discuss the impact on the baseline risk and the

risk reduction for each of these SAMAs if the curve were shifted consistent with the staff comments on the IPEEE.

RAI 5a

As commented above for RAI 4f, the response to this RAI involves combining the results of two different determinations of benefit. How does this inconsistency impact the response to this RAI?

Oyster Creek Nuclear Generating Station

cc:

Site Vice President - Oyster Creek
Nuclear Generating Station
AmerGen Energy Company, LLC
P.O. Box 388
Forked River, NJ 08731

Senior Vice President of
Operations
AmerGen Energy Company, LLC
200 Exelon Way, KSA 3-N
Kennett Square, PA 19348

Kathryn M. Sutton, Esquire
Morgan, Lewis, & Bockius LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004

Kent Tosch, Chief
New Jersey Department of
Environmental Protection
Bureau of Nuclear Engineering
CN 415
Trenton, NJ 08625

Vice President - Licensing and
Regulatory Affairs
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

Mayor of Lacey Township
818 West Lacey Road
Forked River, NJ 08731

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 445
Forked River, NJ 08731

Director - Licensing and Regulatory Affairs
AmerGen Energy Company, LLC
Correspondence Control
P.O. Box 160
Kennett Square, PA 19348

Manager Licensing - Oyster Creek
Exelon Generation Company, LLC
Correspondence Control
P.O. Box 160
Kennett Square, PA 19348

Regulatory Assurance Manager
Oyster Creek
AmerGen Energy Company, LLC
P.O. Box 388
Forked River, NJ 08731

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

Ron Bellamy, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

Correspondence Control Desk
AmerGen Energy Company, LLC
200 Exelon Way, KSA 1-–1
Kennett Square, PA 19348

Oyster Creek Nuclear Generating Station
Plant Manager
AmerGen Energy Company, LLC
P.O. Box 388
Forked River, NJ 08731

License Renewal Manager
Exelon Generation Company, LLC
200 Exelon Way, Suite 210
Kennett Square, PA 19348

cc:

Mr. James Ross
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708