

April 22, 2004

Mr. Christopher M. Crane  
President and Chief Nuclear Officer  
AmerGen Energy Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: OYSTER CREEK NUCLEAR GENERATING STATION - REVISION TO  
EMERGENCY PLAN EMERGENCY ACTION LEVELS (TAC NO. MB7989)

Dear Mr. Crane:

By letter dated March 10, 2003, as supplemented by letters dated December 12, 2003, February 26 and April 16, 2004, AmerGen Energy Company, LLC, submitted a proposed revision to Version 17 of the Oyster Creek Nuclear Generating Station (OCNGS) Emergency Plan for Nuclear Regulatory Commission (NRC) approval. AmerGen proposed revising the initiating conditions (ICs) and corresponding emergency action levels (EALs) to incorporate NUMARC/NESP-007, "Methodology for Development of Emergency Action Levels," Revision 2, January 1992, EALs, which had been endorsed by the NRC in Regulatory Guide (RG) 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Revision 3, as an acceptable method by which licensees may develop site-specific emergency classification schemes. AmerGen proposed to deviate from guidance in NUMARC/NESP-007 in some specific cases by using revised guidance from Nuclear Energy Institute (NEI) 99-01, Revision 4, "Methodology for Development of Emergency Action Levels," which was endorsed by the NRC in RG 1.101, Revision 4.

The NRC staff concludes that the proposed revision is acceptable to meet the guidance in NUMARC/NESP-007 and NEI 99-01, Revision 4, except where specifically discussed for IC HU4, EAL #2. By its April 16, 2004, letter, AmerGen committed to make changes to IC HU4 to reflect the NRC staff's comments. The NRC staff concludes that the proposed revision to the EALs and ICs meets the requirements of 10 CFR 50.47(b)(4) and Appendix E to 10 CFR Part 50. Details of the NRC staff's review are set forth in the enclosed Safety Evaluation.

Sincerely,

**/RA/**

Peter S. Tam, Senior Project Manager, Section 1  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosure: Safety Evaluation

cc w/encl: See next page

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\*Safety evaluation transmitted by memo of this date.

\*\*Concurrence on revision to last paragraph of Section 3.10.

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO THE PROPOSED CHANGE TO THE EMERGENCY PLAN  
FOR OYSTER CREEK NUCLEAR GENERATING STATION

AMERGEN ENERGY COMPANY, LLC

DOCKET NO. 50-219

1.0 INTRODUCTION

By letter dated March 10, 2003 (ML030790039), as supplemented by letters dated December 12, 2003 (ML033570561), February 26 (ML040690952) and April 16, 2004 (ML041170002), AmerGen Energy Company, LLC (AmerGen, the licensee) submitted for Nuclear Regulatory Commission (NRC) approval a proposed revision to Version 17 of the Oyster Creek Nuclear Generating Station (OCNGS) Emergency Plan. The proposed revision would revise the initiating conditions (ICs) and corresponding emergency action levels (EALs) for OCGNS. Specifically, the licensee would revise the Oyster Creek Nuclear Generating Station Annex, Section 3, Emergency Action Levels (EALs) and EAL Technical Bases, incorporating guidance in NUMARC/NESP-007, "Methodology for Development of Emergency Action Levels," Revision 2, January 1992, were submitted to the NRC. NUMARC/NESP-007 EALs had been previously endorsed by the NRC in Regulatory Guide (RG) 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Revision 3, as an acceptable method by which licensees may develop site-specific emergency classification schemes. Additionally, the licensee proposed to deviate from guidance in NUMARC/NESP-007 in some specific cases by using revised guidance from NEI 99-01, Revision 4, "Methodology for Development of Emergency Action Levels," which was endorsed by the NRC in RG 1.101, Revision 4.

2.0 REGULATORY EVALUATION

The NRC staff finds that the licensee identified the applicable regulatory requirements in the attachment of its submittal. The regulatory requirements and guidance for which the NRC staff based its acceptance are presented below.

2.1 Regulation

Title 10 of the *Code of Federal Regulations*, Part 50 (10 CFR Part 50), Subsection 47(b)(4) states, in part: "A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee..."

Enclosure

10 CFR Part 50, Appendix E, Section IV.B states, in part: "...These emergency action levels shall be discussed and agreed on by the applicant and State and local governmental authorities and approved by the NRC...".

Appendix E, Subsection IV.C, to 10 CFR Part 50, states, in part: "...action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as pressure in the containment and response of the Emergency Core Cooling System) for notification of offsite agencies shall be described...The emergency classes defined shall include (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency...".

## 2.2 Guidance Documents

RG 1.101, Revision 2, states, in part: "The criteria and recommendations contained in Revision 1 of NUREG-0654/FEMA-REP-1 are considered by the NRC staff to be acceptable methods for complying with the standards in 10 CFR 50.47 that must be met in onsite and offsite emergency response plans."

NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," includes the following criteria for EALs:

Section II.D.1 An emergency classification and emergency action level scheme as set forth in Appendix 1 must be established by the licensee.

Section II.D.2 The initiating conditions shall include the example conditions found in Appendix 1 [of NUREG-0654].

RG 1.101, Revision 3, endorsed NUMARC/NESP-007, as an acceptable alternative to NUREG-0654 for developing EAL schemes. In Section D, "Implementation," the RG provided the following:

Except in those cases in which an applicant or licensee proposes an acceptable alternative method for complying with specific portions of the Commission's regulations, the method described in this regulatory guide will be used in the evaluation of emergency plans and preparedness for nuclear power reactors.

RG 1.101, Revision 4, endorsed NEI 99-01, Revision 4, as an acceptable alternative to NUREG-0654 for developing EAL schemes. In Section C, "Regulatory Position", the RG provided the following:

...the guidance contained in NEI 99-01 (Revision 4, January, 2003), "Methodology for Development of Emergency Action Levels," is acceptable to the NRC staff as an alternative method to that described in Appendix 1 to NUREG-0654/FEMA-REP-1 and NUMARC/NESP-007 for developing EALs required in Section IV of Appendix E to 10 CFR 50 and 10 CFR 50.47(b)(4).

Regulatory Information Summary (RIS) 2003-18, "Use of NEI 99-01, Methodology for Development of Emergency Action Levels" provided methodology for the upgrade of NUMARC/NESP-007 EALs to NEI 99-01, Revision 4 EALs. In discussing the acceptability to incorporate NEI 99-01 guidance, RIS 2003-18 states:

NUMARC-007 users implementing shutdown EALs or ISFSI [independent spent fuel storage installation] EALs or updating EALs to include lessons learned from NEI 99-01, Revision 4, should implement changes under 10 CFR 50.54(q) since these changes are enhancements to the existing classification scheme.

### 2.3 NRC Staff Position on EAL Changes

As stated above, in Revision 3 to RG 1.101, the NRC endorsed NUMARC/NESP-007, Revision 2, as an acceptable method for licensees to meet the requirements of 10 CFR 50.47 (b)(4) and Appendix E to 10 CFR Part 50. The NRC staff relied upon the guidance in NUMARC/NESP-007 as the basis for its review of the OCNCS EAL changes, with additional reference, where applicable, to the NRC-endorsed NEI 99-01, Revision 4, and RIS 2003-18 guidance. Where applicable, the NRC has agreed to allow a licensee to adopt enhancements from NEI 99-01, Revision 4, into a NUMARC/NESP-007 EAL scheme. In RIS 2003-18, NRC staff concluded that such changes are enhancements to the existing classification scheme.

### 3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's regulatory and technical analyses in support of its proposed emergency plan changes which are described in the referenced letters. Details of the NRC staff's evaluation follow.

The licensee organized the EAL tables into four (4) recognition categories and subcategories:

#### (1) Abnormal Radiological Levels/Effluents ("R")

- Radiological Effluents
- Abnormal Rad Levels
- Coolant Activity
- Irradiated Fuel Accidents

#### (2) Fission Product Barriers ("F")

- Fuel Clad Barrier
- Reactor Coolant System (RCS) Barrier
- Primary Containment (PC) Barrier

#### (3) System Malfunctions ("M")

- Loss of Alternating Current (AC) Power
- Loss of Direct Current (DC)
- Failure of Reactor Protection System (RPS)
- Decay Heat Removal
- Loss of Annunciators

RCS Leakage/Reactor Pressure Vessel (RPV) Draindown  
Loss of Communications  
Technical Specifications (TSs)

(4) Hazards and Other Conditions (“H”)

Security Events  
Control Room Evacuation  
Natural or Man-Made Events  
Fire/Explosion  
Toxic or Flammable Gas  
Discretionary

Most of the proposed EALs conformed closely to the NUMARC/NESP-007 guidance; however, some of the licensee’s proposed EALs depart from the example ICs and EALs in NUMARC/NESP-007, Revision 2. The NRC staff’s evaluations of these departures are discussed below in Sections 3.1 through 3.10:

3.1 Designated Operational Conditions

NUMARC/NESP-007 categorizes emergencies to be classified by assessing plant conditions to ICs and provides threshold conditions for each EAL based on the designated operational condition, or MODE. In NUMARC/NESP-007, boiling-water reactors (BWRs) are assigned five (5) modes and a defueled designation. OCGNS TSs do not have a designated MODE for a Start-Up condition, as defined and identified for ICs and EALs in NUMARC/NESP-007. The chart below shows the difference between the MODEs identified for BWRs in NUMARC/NESP-007 versus OCGNS:

<u>NUMARC/NESP-007</u>	<u>OCNGS Technical Specifications</u>
MODE 1 - Power Operation	MODE 1 - Power Operation
MODE 2 - Start-up	MODE 2 - Hot Shutdown
MODE 3 - Hot Shutdown	MODE 3 - Cold Shutdown
MODE 4 - Cold Shutdown	MODE 4 - Refueling
MODE 5 - Refueling	DEFUELED
DEFUELED	

The licensee provided explanation to the differences between operational conditions in NUMARC/NESP-007 and OCGNS TSs. For OCGNS, the Power Operation (MODE 1, NUMARC/NESP-007) and Start-up (MODE 2, NUMARC/NESP-007) operational conditions are represented in OCGNS TSs as Power Operation, MODE 1. ICs and EALs in the licensee’s submittal were accordingly adjusted to reflect the difference in identified operational conditions in NUMARC/NESP-007.

This site-specific difference in operational conditions meets the intent of NUMARC/NESP-007 and is acceptable for revision.

### 3.2 Five Initiating Conditions/EALs

In the EAL threshold value for these ICs, the licensee provided an additional action level which departed from the NUMARC/NESP-007 guidance. Specifically, the inclusion of additional information was included in the EAL for determining RPV level, as applicable to classifications for potential loss of a fission product barrier, loss of a fission product barrier, Site Area Emergency, and General Emergency. The proposed deviations from NUREG/NESP-007 read as follows:

- (1) Table F-1, Fuel Clad Barrier Bases 1.a.2, Potential Loss

RPV level < 0" TAF OR CANNOT be determined

- (2) Table F-1, RCS Barrier Bases 2.a.1, Loss

RPV level < 0" TAF (not intentionally lowered by procedure) OR CANNOT be determined

- (3) IC MG1, Prolonged Loss of ALL Offsite AC Power AND Prolonged Loss of All Onsite AC Power

Both 4160 V Busses 1C and 1D de-energized for >15 min.

AND

ANY of the following:

- Restoration of at least one emergency bus within 1 hour is not likely
- REV level CANNOT be maintained >0" TAF OR CANNOT be determined
- Torus water temperature and RPV pressure exceeds the Heat Capacity Temperature Limit (Figure F, EMG-3200.02)

- (4) IC MG4, Auto and Manual SCRAM Successful and Loss of Core Cooling or Heat Sink

RPS setpoint for an automatic SCRAM exceeded

AND

Failure of automatic RPS, ARI and manual SCRAM to reduce reactor power < 2%

AND EITHER:

RPV level CANNOT be restored and maintained > -30" TAF or cannot be determined

OR

Torus water temperature and RPV pressure exceeds the Heat Capacity Temperature Limit (Figure F, EMG-3200.02).”

- (5) IC MS7, “Loss of Water Level in the Reactor Vessel That Has or Will Uncover Fuel in the Reactor Vessel”

RPV level <0” TAF OR CANNOT be determined

The additional condition “or cannot be determined” has been included into the EAL scheme by the licensee to account for situations where specific OCNCS emergency operating procedures (EOPs) reference action points used to determine water level. In the licensee’s justification for these changes, the licensee stated that “RPV water level must be assumed to be below the barrier threshold if RPV water level cannot be determined by any direct or indirect method.” In the basis for proposed EAL changes, the licensee provides the following rationale to be used in classification of events:

With regard to the various situations involving a loss of RPV water level indications, in general, the EOP action point ‘cannot be determined’ relates to the condition where the operator has no idea where RPV water level is, and cannot determine by any means available that the RPV water level is above the point where adequate core cooling can be assured.

This deviation from specific IC and EAL references in NUMARC/NESP-007 meets the intent of NUMARC/NESP-007 and is acceptable for revision.

### 3.3 Primary Containment Barrier, Reactor Pressure Vessel Water Level

NUMARC/NESP-007 describes conditions for meeting a “potential loss” of the containment barrier as an RPV level in conjunction with the maximum core uncover time limit (MCUTL). In the submittal package for this EAL, the licensee identifies that the application for MCUTL was corrected for this condition in NEI 99-01, Revision 4, which was endorsed by the NRC in RG 1.101, Revision 4. Additionally, Regulatory Information Summary (RIS) 2003-18 provided guidance for licensee-proposed modifications to NUMARC/NESP-007 EALs to incorporate enhancements in NEI 99-01, Revision 4. In RIS 2003-18, the NRC staff provided a position that it was acceptable to modify EALs from NUMARC/NESP-007 to NEI 99-01, provided that the modifications did not decrease the effectiveness of the emergency plan and the change continued to meet the requirements of 10 CFR 50.47(b)(4) and Appendix E to 10 CFR Part 50. These modifications were considered enhancements to the existing EAL scheme in NUMARC/NESP-007.

The licensee has applied the NEI 99-01, Revision 4 EAL condition PC.4 for primary containment flooding (which is a condition for severe accident management guidance (SAMG) entry at OCNCS) required as the condition for classification of this EAL. This change provides a specific qualifying operational action (meeting the condition for primary containment flooding) with meeting the classified condition for this EAL. The licensee provides an EAL specific reference to NEI 99-01, Revision 4 IC PC.4 and explains the difference between the NUMARC/NESP-007 and NEI 99-01, Revision 4 conditions in the Primary Containment Barrier Bases document.



This change, which departs from NUMARC/NESP-007 and uses the corresponding EAL descriptions in NEI 99-01, meets the intent for making enhancements to NUMARC/NESP-007 in accordance with RIS 2003-18. This change is acceptable for revision.

3.4 Initiating Conditions/EALs: (1)MG4, Auto and Manual SCRAM Successful and Loss of Core Cooling or Heat Sink; (2) MS4, Auto and Manual SCRAM NOT Successful; (3) MA4, Auto SCRAM NOT Successful OR Loss of Manual SCRAM Capability

In the EALs for the above referenced Initiating Conditions, the licensee takes credit for alternate rod injection (ARI) as a means to manually shutdown the reactor within the conditions for the EALs. Specifically, ARI is included as one of the manual shutdown systems available within the context of NUMARC/NESP-007 systems as a set of actions by the reactor operator(s) at the reactor control console which causes control rods to be “rapidly” inserted into the core and brings the reactor subcritical.

In the licensee’s justification for the inclusion of ARI as a “rapid” manual means to bring the reactor subcritical, the following was provided:

ARI is designed to function and shutdown the reactor in less than 45 seconds. HCU [hydraulic control unit] scram valves open in less than 38 seconds and rod insertion is less than 5 seconds.

Applicable specifically to IC MA4, EAL #2, the inclusion of the manual SCRAM capability is a departure from NUMARC/NESP-007 to specifically address State of New Jersey, Bureau of Nuclear Engineering request to include an additional EAL for the classification of conditions consistent with the Hope Creek Plant (also in New Jersey). The proposed EAL reads as follows:

Loss of manual SCRAM capability indicated by failure of ALL manual SCRAM methods to achieve reactor shutdown.

This condition, while representing a situation where challenges to fuel design limits may not occur, represents a condition where rapid reactor shutdown cannot be established prior to the fuel barrier being challenged should an RPS set point subsequently be exceeded. The licensee proposed this deviation from NUMARC/NESP-007 to provide the same EAL conditions as a similar other BWR EAL scheme for another nuclear plant located in the State of New Jersey.

Based on the licensee’s information concerning ARI actuation times at OCNGS, the NUMARC/NESP-007 intent for “rapid control rod insertion” appears to be within the licensee’s description of actuation times for ARI and is acceptable for revision. The use of an additional EAL in order to consistently classify with another nuclear plant located in the State of New Jersey, and at the request of the State of New Jersey, does not deviate from the intent of NUMARC/NESP-007 and is acceptable for revision.

3.5 Initiating Condition/EAL MS5, Complete Loss of Function Needed to Achieve or Maintain Hot Shutdown

The licensee added EAL threshold values which were incorporated in NEI 99-01, Revision 4, in order to provide additional and specific criteria to better enable the operator(s) to classify an emergency condition based on this IC. Specifically, the OCNCS EAL for this condition includes the following:

Torus water temperature and RPV pressure CANNOT be maintained below the Heat Capacity Temperature Limit (Figure F, EMG-3200.02).

The additional EAL criteria implements NEI 99-01, Revision 4, BWR specific criteria for defining an inability to maintain parameters below the Heat Capacity Temperature Limit, which represents a loss of function to achieve or maintain hot shutdown. Per OCNCS procedure EMG-3200.02, this condition would require an Emergency RPV Depressurization.

This change, which departs from NUMARC/NESP-007 and uses the corresponding EAL descriptions in NEI 99-01, meets the intent for making enhancements to NUMARC/NESP-007 in accordance with RIS 2003-18. This change is acceptable for revision.

3.6 Initiating Condition/EALs (1) MA6, "Unplanned Loss of Most or All Safety System Annunciation or Indication in Control Room With Either a Significant Transient in Progress, or Compensatory Non-Alarming Indicators are Unavailable"; (2) MU6, "Unplanned Loss of Most or All Safety System Annunciation or Indication in the Control Room >15 min."

In the OCNCS EAL threshold value and bases for Initiating Conditions MA6 and MU6, the condition "In the opinion of the Shift Supervisor, the loss of the annunciators or indicators requires increased surveillance to safely operate the unit(s)" was not used. This represents a deviation from NUMARC/NESP-007. In the licensee's justification, the conclusion was reached that the statement did not provide useful assessment criteria to the EAL threshold. Further, the licensee provided detailed and specific identification of safety system annunciators and plant transient conditions to allow the operator(s) definitive criteria on which to base the classification.

The licensee has applied the NEI 99-01, Revision 4, EAL conditions SA.4 and SU3 for Loss of Annunciators, respectively, as the condition for classification of this EAL. NEI 99-01 provided guidance for additional specific indications for applicable plant transients which were expanded from the guidance in NUMARC/NESP-007. The licensee provides an EAL specific reference to NEI 99-01, Revision 4, IC SA.4 and explains the difference between the NUMARC/NESP-007 and NEI 99-01, Revision 4.

This change, which departs from NUREG/NESP-007 and uses the corresponding EAL descriptions in NEI 99-01, meets the intent for making enhancements to NUREG/NESP-007 in accordance with RIS 2003-18. This change is acceptable for revision.

3.7 Initiating Condition/EAL MS7, "Loss of Water Level in the Reactor Vessel that has or Will Uncover Fuel in the Reactor Vessel"

Under the EAL threshold value for this IC, the EAL in NUMARC/NESP-007 IC SS5 is not used. Specifically, EAL 1.a: "Loss of all decay heat removal cooling as determined by (site-specific) procedure" is not included in the OCNCS EAL scheme. In the justification for this deviation, the licensee states that the EAL in NUMARC/NESP-007 SS5, 1.a. "is not necessary to conclude that the plant condition warrants a Site Area Emergency due to core uncover." The licensee includes the EAL threshold value in IC MS5 and MS7 which provides a precursor to severe core damage through the following EAL:

RPV level <0" TAF OR CANNOT be determined

In review of this change, it was noted that IC MS5, (evaluated above in Section 3.5), contains EAL threshold values which would declare a Site Area Emergency for conditions which would be expected to be met earlier than a loss of all decay heat removal condition. Specifically, those conditions included in IC MS5 which relate to complete loss of function needed to achieve or maintain hot shutdown. Additionally, as discussed in Section 3.2 of this SE, the licensee includes additional EAL threshold values ("OR CANNOT be determined") which provides conservatism to classifications where reactor water level is unknown to the operator(s).

This change meets the intent of NUMARC/NESP-007 and is acceptable for revision.

3.8 Initiating Condition/EAL HU1, "Confirmed Security Event That Indicates a Potential Degradation in the Level of Plant Safety"

The proposed OCNCS EAL deviates from NUMARC/NESP-007, but is consistent with proposed EALs for Unusual Events which were approved in response to NRC's October 6, 2001, Safeguards Advisory and NRC's November 6, 2001, Information Assessment Team Recommended Actions in Response to a Site-Specific Credible Threat at a Nuclear Power Plant. In a February 2, 2002, letter from the NRC Director, Division of Inspection Program Management/NRR to the NEI, specific EAL wording was recommended as meeting the intent of the Advisory. The licensee followed the recommendation referred to in the above information for the development of the proposed EAL. The proposed EAL reads as follows:

1. A credible threat to the station is reported by the NRC.

OR

2. BOTH of the following criteria are met for a credible threat reported by any other outside agency or determined per the Safeguards Contingency Plan:
  - Is specifically directed towards the station
  - Is imminent (< 2 hours).

OR

3. Attempted intrusion and attack of the Protected Area(s)

OR

4. Attempted sabotage discovered within the Protected Area(s)

OR

5. Hostage/Extortion situation that threatens normal plant operations.

This departure from NUMARC/NESP-007 is in agreement with subsequent NRC recommendations directed in additional actions in response to site-specific credible threats at nuclear power plants and corresponding changes in EALs which provide prompt awareness to offsite governmental agencies and support organizations. As such, the proposed EAL meets the intent of NRC recommended actions and is acceptable for revision.

3.9 Initiating Condition/EAL HA3, "Natural OR Destructive Phenomena Affecting a Vital Area"

The licensee proposed EAL changes to this IC and EALs in accordance with NEI 99-01, Revision 4. Specifically, the licensee proposed the following EALs under this IC:

1. Confirmed earthquake requiring reactor scram in accordance with 2000-ABN-3200.38 Station Seismic Event.

OR

2. Tornado or sustained wind speeds > 100 mph causing damage to Plant Vital Structures (Table H-1)

OR

3. Report of visible structural damage to ANY Plant Vital Structures (Table H-1) due to natural or destructive phenomena

OR

4. Vehicle crash damaging or affecting Plant Vital Structures (Table H-1)

OR

5. Abnormal Intake Structure level, as indicated by EITHER:

>6.0 ft. MSL (>4.92 psig on PI-SWS-1[2])

OR

< -4.0ft. MSL (<.50 psig on PI-533-1172 or PI-533-1173)

MSL = Mean Sea Level

Specific to EAL #1, the licensee states that OCNGS does not have installed seismic instrumentation to determine if seismic activity is in excess of operating basis earthquake (OBE) levels. Procedure 2000-ABN-3200.38 "Station Seismic Event" (and referenced in EAL #1) requires the shift manager to scram the reactor for conditions in which the seismic activity causes a threat to safe plant operation. The Basis for EAL #1 describes methods in which the shift manager can determine the magnitude of the earthquake. Those methods include calling the Lamont-Doherty Geological Observatory, (identified as the primary confirmation source), or determining from reports from television or radio stations, or reports from university monitoring stations.

EAL #1 defines a site-specific method to indicate an OBE, as described in NEI 99-01. Because OCNGS does not have seismic equipment onsite, other indirect means must be used to determine appropriate actions to an OBE magnitude earthquake, as specified by Procedure 2000-ABN-3200.38, and meeting EAL #1 for classification of an Alert.

Specific to EAL #2, the licensee proposes to add criteria to the EAL which, in addition to the occurrence of >100 mph winds, damage has occurred to Plant Vital Structures. The applied wind speed value represents potential wind loading forces from which damage could result, and the licensee appropriately identifies analysis from the OCNGS Updated Final Safety Analysis Report (UFSAR), Update 3.3.1, as basis for design wind speed to be used in EAL #2.

In a January 20, 2004, conference call between the NRC staff and licensee personnel, discussion concerning proposed IC/EAL HA3, #2 resulted in the licensee agreeing to revise the NUMARC/NESP-007 reference within HA3 to indicate implementation of the guidance of NEI 99-01, Revision 4 for EAL HA3.

Specific to EAL #3, the licensee provided specific reference in the Basis consistent with NEI 99-01, Revision 4, guidance, including description that "[t]he threshold value for this EAL should be determined relative to the damage that might occur from events described in Threshold Values 1 & 2."

Specific to EAL #4, the licensee provided specific reference in the Basis to further assist the operator(s) in classifying an event per this EAL, including description that "A vehicle crash includes aircraft and large motor vehicles, such as a crane." EAL #4 and Basis information is consistent with NEI 99-01, Revision 4 guidance.

Specific to EAL #5, the licensee provided specific reference in the Basis to describe the justification for site-specific MSL levels and corresponding instrument pressure indications affecting Plant Vital Structures and equipment. The EAL does not classify based on associated damage which results from abnormal intake levels, which is addressed in EAL #3. EAL #4 and Basis information is consistent with NEI 99-01, Revision 4 guidance.

NEI 99-01 IC HA1, EAL #4 is omitted from the proposed revision of the OCNGS EALs. The justification provided in the deviation to not include this EAL is that safety-related plant areas are not susceptible to turbine failure-generated missiles. As discussed in EAL #3, damage to any plant vital structure, from any source, would be classified as an Alert.

These changes, which depart from NUMARC/NESP-007 and uses the corresponding EAL descriptions in NEI 99-01, Revision 4, meet the intent for making enhancements to NUREG/NESP-007 in accordance with RIS 2003-18. This change is acceptable for revision.

3.10 Initiating Condition/EAL HU4, "Fire Within Protected Area Boundary NOT Extinguished in <15 Min. of Detection"

The licensee relocated IC HU4, EAL #2 from guidance contained in NUMARC/NESP-007, HU1, EAL #5. NUMARC/NESP-007 IC HU1 related to "Natural or Destructive Phenomena in the Protected Area." In the justification for this deviation, the licensee stated that the EAL was more consistent with IC HU4 "Fire Within Protected Area..." than NUMARC/NESP-007 guidance to include as a stand alone IC or as part of OCNGS IC HU6. Discussion concerning this EAL during the January 20, 2004, conference call between the NRC staff and licensee personnel concluded with the licensee agreeing to make additional changes to the EAL. The February 26, 2004, supplement contained changes to EAL #2, as agreed upon with NRC, but additional information in the Basis specific to EAL #2 is not provided for IC HU4. As a result, specific information which could be used by the operator(s) to assist in the proper classification of an event in accordance with this EAL and incorporating specific guidance for classification of this EAL in accordance with NUMARC/NESP-007 is not in place.

Specific to this EAL are two issues which need to be resolved. First, the IC does not reference explosion within the Protected Area Boundary, as discussed in EAL #2. Second, information in the Basis section for IC HU4, EAL #2 needs to be included, consistent with NUMARC/NESP-007 basis discussion. Additionally, the proposed format of the IC, with Table H-1 directly under EAL #2, could cause the operator(s) to misunderstand that only Plant Vital Structures are applicable to the criteria for classification of events under EAL #2.

Based on the NRC staff's review, IC HU4, EAL #2 is not approved as proposed by the licensee. To acceptably address the deviation to IC HU4, EAL #2 in a manner which the NRC will approve, the following actions must be performed:

- 1) Table H-1, Plant Vital Structures, is located below EAL Threshold Value #2. The table is referenced by Threshold Value #1 and in its current location may be misinterpreted to associate with EAL Threshold Value #2. Clarify Table H-1 applicability.
- 2) The Initiating Condition for HU-4 does not refer to EAL Threshold Value #2 (Report by plant personnel of an unanticipated explosion). Clarify the Initiating Condition.
- 3) The Basis discussion in HU4 does not provide basis information or guidance for EAL Threshold Value #2. Clarify the HU4 basis.

The licensee was contacted on April 13, 2004, and made aware of this issue. The licensee understands that this additional change must be addressed prior to implementation of the proposed revision, including having discussed and agreed on by the licensee and State and local governmental authorities. By letter dated April 16, 2004, the licensee committed to resolve the above three (3) comments per the 10 CFR 50.54q process. The NRC staff agrees that, based on the completion of the above corrective actions by the licensee and review and approval by applicable State and local government officials, the NRC staff would not consider

these three changes a decrease in effectiveness from the guidance in NUMARC/NESP-007. Accordingly, the changes may be implemented in accordance with 10 CFR 50.54(q).

#### 4.0 STATE CONSULTATION

Appendix E of 10 CFR Part 50, states: "These emergency action levels will be discussed and agreed on by the applicant and State and local governmental authorities and approved by NRC." In a March 10, 2003, letter (included as attachment in the licensee's March 10, 2003, submittal) from the State of New Jersey, Department of Environmental Protection to the licensee, Mr. Kent Tosch, Manager, Bureau of Nuclear Engineering, documented that the New Jersey Bureau of Nuclear Engineering completed the review of the proposed EALs planned for submittal by AmerGen and those changes were acceptable to the State of New Jersey. Additionally, Mr. Tosch stated that the Bureau of Nuclear Engineering and AmerGen had jointly participated in working meetings to review the EALs, bases document, and NUMARC/NESP-007 guidance. The licensee's February 26, 2004, letter to the NRC stated that the revised EALs included in Supplement #2 had been reviewed and approved by the State of New Jersey, Bureau of Nuclear Engineering. With the revision of the proposed EALs to include additional changes identified in Section 3.10 above, the State of New Jersey, Bureau of Nuclear Engineering should review and agree with the final version of the OCNGS EALs and EAL Technical Bases. Once the (State of New Jersey) review is performed and documented, the NRC staff will consider this agreement as satisfying the requirement of Appendix E.

#### 5.0 CONCLUSION

Based on a review of the proposed changes to the EAL classification scheme for OCNGS, the NRC staff concludes that the proposed changes are acceptable to meet the guidance in NUMARC/NESP-007 and NEI 99-01, Revision 4, except where specifically discussed for IC HU4, EAL #2 (Section 3.10). By its April 16, 2004, letter the licensee committed to make changes to IC HU4. Those changes will be reviewed and agreed upon by appropriate State of New Jersey governmental officials prior to implementation. In conclusion, the proposed revision to the EALs meets the requirements of 10 CFR 50.47(b)(4) and Appendix E to 10 CFR Part 50.

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