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10 CFR 50.4  
10 CFR 52.79

December 19, 2008

UN#08-093

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

Subject: UniStar Nuclear Energy, NRC Docket No. 52-016  
Submittal of Response to Request for Additional Information for the  
Calvert Cliffs Nuclear Power Plant, Unit 3  
RAI No. 27 – Emergency Planning, Question 13.03-01

Reference: John Rycyna (NRC) to George Wrobel (UniStar), "RAI No 27 ORLT 1178,"  
email dated October 21, 2008

The purpose of this letter is to respond to the request for additional information (RAI) identified in the NRC e-mail correspondence to UniStar Nuclear, dated October 21, 2008 (Reference). This RAI addresses Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC), as discussed in Section 13.3 of the Final Safety Analysis Report, as submitted in Part 10 of the CCNPP Unit 3 Combined License Application (COLA).

The enclosure provides our response to RAI No. 27, Question 13.03-01, which includes revised COLA content. A Licensing Basis Document Change Request has been initiated to incorporate this change into a future revision of the COLA. There are no new regulatory commitments in this correspondence.

If there are any questions regarding this transmittal, please contact me at (410) 470-4205 or Mr. George Wrobel at (585) 771-3535.

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*I declare under penalty of perjury that the foregoing is true and correct.*

Executed on December 19, 2008

A handwritten signature in black ink, appearing to read 'Greg Gibson', with a long horizontal flourish extending to the right.

Greg Gibson

Enclosure: Response to RAI No. 27, Emergency Planning, Question 13.03-01

cc: U.S. NRC Region I  
U.S. NRC Resident Inspector, Calvert Cliffs Nuclear Power Plant, Units 1 and 2  
NRC Environmental Project Manager, U.S. EPR Combined License Application  
NRC Project Manager, U.S. EPR Combined License Application  
NRC Project Manager, U.S. EPR Design Certification Application (w/o enclosure)

**Enclosure**

**Response to RAI No. 27**

**Emergency Planning**

**Question 13.03-01**

**December 19, 2008**

**RAI No. 27 (Question 13.03-01)**

FSAR Section 13.03

ITAAC-1

Basis: 10 CFR 50.47(b)(8), 10 CFR 52.80

Part 10 ITAAC - COL application Table 2.3-1, "ITAAC For Emergency Planning," provides acceptance criteria for planning standard 5.0, "Emergency Facilities and Equipment." Acceptance criterion 5.1.8 states "The {CCNPP Unit 3} U.S. EPR OSC communications capabilities are addressed by Acceptance Criterion 3.1.1" The staff is unable to locate a discussion of the OSC in that criterion. Please provide that discussion or correct the reference.

ITAAC-2

Basis: 10 CFR 50.47(b)(14), 10 CFR 52.80

Part 10 ITAAC - COL application Table 2.3-1, "ITAAC For Emergency Planning," provides acceptance criteria for planning standard 8.0, "Exercises and Drills." Please address the following questions pertaining to the full-participation exercise, and applicable guidance provided in Regulatory Guide (RG) 1.206, Appendix B, Table C.II.1-B1, "Emergency Planning – Generic Inspections, Tests, Analyses, and Acceptance Criteria (EP-ITAAC)."

- a. Table C.II.1-B1 (generic ITAAC) acceptance criterion 14.1.3 addresses offsite exercise objectives associated with the full participation exercise. Explain why Table 2.3-1 does not include an acceptance criterion to reflect the offsite exercise objectives associated with the full participation exercise, and how this is consistent with the intent of this generic ITAAC. Either provide the appropriate acceptance criterion, or explain why it is not required.
- b. Table C.II.1-B1 acceptance criterion 14.1.2 includes the bracketed statement that "[t]he COL applicant will identify responsibilities and associated acceptance criteria." Explain why Table 2.3-1 (acceptance criteria 8.1.2.1 and 8.1.2.2) does not identify any responsibilities and associated acceptance criteria, in relation to onsite emergency response personnel successfully performing their assigned responsibilities. Some examples that are not addressed include:
  - i. Accident Assessment and Classification
  - ii. Notifications
  - iii. Emergency Response
  - iv. Emergency Response Facilities
  - v. Radiological Assessment and Control
  - vi. Public Information
  - vii. Evaluation

The goal of ITAAC acceptance criteria is to be objective criteria that can be demonstrated to have been met prior to operation. The acceptance criteria must be specific and sufficiently objective, in order to clearly identify what the requirements are, and to provide the ability to determine whether they have been met. As written, the acceptance criteria do not provide such clear and objective criteria. (An example of a set of ITAAC with more detail may be found in pages 13-125 *et seq.* of the publicly available Safety Evaluation for the Vogle Unit 3 COL — ADAMS Accession Number ML071970283) For the full participation exercise acceptance criteria in Table 2.3-1, either provide specific exercise objectives and associated acceptance criteria, consistent with Table C.II.1- or explain why those objectives and criteria are not required.

**RESPONSE**

ITAAC-1

The COL application Table 2.3-1, "ITAAC for Emergency Planning" will be modified to state:

<p>3.1: The means exists for communications among the Control Room, TSC, <u>OSC</u>, EOF, principal State and local emergency operations centers (EOCs), and radiological field assessment teams. [F.1.d]</p>	<p>3.1: A test is performed to confirm the capability to communicate between: 1) the Control Room, TSC, <u>OSC</u> and EOF; 2) the Control Room, TSC, and EOF with the principal EOCs; and 3) the TSC and EOF with the radiological field monitoring teams.</p>	<p>3.1.1: Communications (both primary and secondary methods/systems) are established: 1) Between the {CCNPP Unit 3} Control Room and TSC, <u>OSC</u> and the EOF, 2) Between the {CCNPP Unit 3} Control Room and TSC and the EOF with the {(a) State of Maryland Warning Point and EOC; b) St. Mary's County Warning Point and EOC; and c) Calvert County Warning Point and EOC}; and d) Dorchester County Warning Point and EOC, and 3) Between the {CCNPP Unit 3} TSC and EOF with the {CCNPP Unit 3} radiological field monitoring teams.</p>
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ITAAC-2

- a. Acceptance Criterion 8.1.2 in Table 2.3-1 specifically recognizes that a full participation exercise must be conducted prior to fuel loading and that offsite exercise objectives must be met or deficiencies addressed prior to operation above 5% power. As stated in the Acceptance Criteria, FEMA will evaluate offsite response during the full participation exercises utilizing the Federal Register 20-580, FEMA Radiological Emergency Preparedness: Exercise Evaluation Methodology, and agreed to Extent of Play and render their finding with respect to the adequacy of offsite response in support of CCNPP Unit 3 operations. FEMA's finding will be the determining factor for the NRC to authorize fuel loading and operation above 5% power. (Reference 10 CFR 50.54 (gg)). Details of the offsite exercise objectives are not provided in Acceptance Criterion 8.1.2 because exercise planning and conduct is a cooperative effort between FEMA and the State and local jurisdictions involved with emergency planning for CCNPP Unit 3.
- b. In order to ensure that future exercise objectives are sufficient for a comprehensive test of the COL Emergency Plan, Acceptance Criterion 8.1.1 includes reference to the applicable NRC Inspection Procedure that provides evaluation of EP Program Elements that must be tested and development of exercise objectives and specific acceptance criteria. Additionally, other Acceptance Criteria provide details directly related to specific objectives that must be met. Acceptance Criteria 2.1, 2.2, 2.3.1, and 2.3.2 address specific notification methods and procedures; Acceptance Criteria 3.1.1, 3.2.1, 3.2.2, and 3.2.3 address specific emergency communication objectives, and Acceptance Criterion 6.1 speaks directly to accident assessment and classification and radiological assessment and control.

However, to specifically satisfy the bracketed statement listed in Table C.II.1-B1 acceptance criterion 14.1.2, UniStar will modify its COL application Table 2.3-1, "ITAAC for Emergency Planning" Acceptance Criteria 8.1.1 to state:

8.1.1 The exercise is completed within the specified time periods of Appendix E to 10 CFR Part 50. At a minimum, the onsite exercise objectives listed below are met and there are no uncorrected onsite exercise deficiencies.

**A. Accident Assessment and Classification**

1. Demonstrate the ability to identify initiating conditions, determine emergency action level (EAL) parameters, and correctly classify the emergency throughout the exercise.

Standard Criteria:

- a. Determine the correct highest emergency classification level based on events which were in progress, considering past events and their impact on the current conditions, within 15 minutes from the time the initiating condition(s) or EAL is identified.

## **B. Notifications**

1. Demonstrate the ability to alert, notify and mobilize site emergency response personnel.

### Standard Criteria:

- a. Correctly complete the designated checklist and activate the ERO notification system using the appropriate message scenario.
- b. Confirm the ERO is notified and minimum staffing personnel respond to their assigned facilities within 60 minutes of an event declaration requiring facility activation.

2. Demonstrate the ability to notify responsible State, local government agencies within 15 minutes and the NRC within 60 minutes after declaring an emergency.

### Standard Criteria:

- a. Transmit information accurately using the designated checklist, in accordance with approved emergency implementing procedures, within 15 minutes of event classification.
- b. Transmit information using the designated checklist as soon as possible following State and local notification and within 60 minutes of event classification for an initial notification of the NRC.

3. Demonstrate the ability to warn or advise onsite individuals of emergency conditions.

### Standard Criteria:

- a. Initiate notification of onsite individuals (via plant page, telephone, etc.), using the designated checklist, within 15 minutes of event declaration.

4. Demonstrate the capability of the Prompt Notification System (PNS), for the public, to operate properly when required.

### Standard Criteria:

- a. Greater than 94% of ANS sirens are capable of performing their function as indicated by the feedback system. The clarifying notes listed in NEI 99-02, Regulatory Assessment Performance Indicator Guideline, will be used for this test.

## **C. Emergency Response**

1. Demonstrate the capability to direct and control emergency operations.

### Standard Criteria:

- a. Facility command and control is demonstrated by the Shift Supervisor in the Control Room (simulator) upon event declaration, and by the Emergency Plant Manager in the Technical Support Center (TSC) / Emergency Director in the Emergency Operations Facility (EOF) within 60 minutes of ERO notification.

2. Demonstrate the ability to transfer overall command and control from the Shift Supervisor in the Control Room (simulator) to the Emergency Plant Manager in the TSC and/or the Emergency Director in the EOF.

Standard Criteria:

- a. Evaluation of briefings that were conducted prior to turnover includes current plant conditions, response efforts and priorities, and the formal relief of delegable and non-delegable responsibilities.

3. Demonstrate the ability to prepare for around the clock staffing requirements.

Standard Criteria:

- a. Complete 24-hour staff assignments.

4. Demonstrate the ability to perform assembly and accountability for all onsite individuals within 30 minutes of an emergency requiring a Protected Area assembly and accountability.

Standard Criteria:

- a. All Protected Area personnel are assembled in their designated assembly area and accountability is completed within 30 minutes of an emergency requiring Protected Area assembly and accountability.

**D. Emergency Response Facilities**

1. Demonstrate activation of the Operational Support Center (OSC), Technical Support Center (TSC) and Emergency Operations Facility (EOF).

Standard Criteria:

- a. Minimum staffing of the TSC, EOF and OSC is achieved within 60 minutes of the initial ERO notification.

2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC, EOF, and Joint Information Center (JIC), as appropriate.

Standard Criteria:

- a. The adequacy of the emergency equipment in the emergency response facilities, including availability and consistency with emergency implementing procedures, supported the accomplishment of all of the evaluated performance objectives.
- b. The Security Coordinator implements and performs all appropriate steps from the emergency implementing procedures for the ingress, egress and control of onsite and offsite personnel responding to the site during the scenario.
- c. The Radiation Protection Manager (TSC) and staff correctly implements and performs all appropriate steps from the designated checklist when a simulated onsite/offsite release has occurred during the scenario.

3. Demonstrate the adequacy of communications for all emergency support resources.

Standard Criteria:

- a. Emergency response communications listed in emergency implementing procedures are available and operational.
- b. Communications systems are adequate to support CR, TSC, OSC, EOF, and JIC Activation Checklists.
- c. Emergency response facility personnel are able to operate all specified communication systems.
- d. Clear primary communications links are established and maintained for the duration of the exercise.

**E. Radiological Assessment and Control**

1. Demonstrate the ability to obtain onsite radiological surveys and samples.

Standard Criteria:

- a. RP personnel demonstrate the ability to obtain appropriate instruments (range and type) and take surveys for scenario conditions that allow EPA PAGs to be exceeded.
  - b. Airborne samples are properly taken, reported and assessed and utilized when the conditions indicate the need for the information.
2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers.

Standard Criteria:

- a. Emergency workers are issued self-reading dosimeters when radiation levels require, and exposures are controlled to 10 CFR Part 20 limits until the ED authorizes the use of emergency EPA limits.
  - b. Exposure records are available, either from the ALARA computer or a hard copy dose report, and are updated and reviewed throughout the scenario.
3. Demonstrate the ability to assemble and deploy monitoring teams from the decision to do so.

Standard Criteria:

- a. When conditions require offsite surveys, Monitoring Teams are available, properly equipped, briefed and are dispatched in a timely manner.
4. Demonstrate the ability to satisfactorily collect and disseminate field team data.

Standard Criteria:

- a. Offsite radiological environmental data collected is provided as dose rate and counts per minute (cpm) from the plume, both open and closed window, and air sample (gross and net cpm) for particulate and iodine, if applicable.
- b. Offsite radiological environmental data is promptly and accurately communicated from the monitoring team to the Environmental Assessment Director.

5. Demonstrate the ability to develop dose projections.

Standard Criteria:

- a. The Radiological Assessment Specialist or Radiological Assessment Coordinator performs timely and accurately dose projections in accordance with emergency implementing procedures and reports them to the Radiological Assessment Director.

6. Demonstrate the ability to make the decision whether to issue radioprotective drugs (KI) to emergency workers.

Standard Criteria:

- a. Personnel are briefed and issued KI when scenario conditions exceed 25 rem committed dose equivalent (CDE) or the conscious decision is made to issue KI as a precautionary measure.

7. Demonstrate the ability to develop appropriate protective action recommendations (PARs) and notify appropriate authorities within 15 minutes of development.

Standard Criteria:

- a. Total effective dose equivalent (TEDE) and committed dose equivalent CDE to the thyroid dose projections from the dose assessment computer code are compared to the PAGs.
- b. PARs are accurately developed within 15 minutes of the time information of the condition warranting a PAR was available to the ERO.
- c. PAR's are accurately transmitted within 15 minutes of PAR development.

**F. Public Information**

1. Demonstrate the capability to develop and disseminate clear, accurate, and timely information to the news media in accordance with emergency implementing procedures.

Standard Criteria:

- a. Information provided to the media/public is prepared at a level that the public can understand. Visuals and handouts are provided as needed to clarify the information.
- b. Information is coordinated with Federal, State and local agencies to maintain factual consistency.

2. Demonstrate the capability to establish and effectively operate rumor control in a coordinated fashion.

Standard Criteria:

- a. Calls are answered in a timely manner with the correct information, in accordance with emergency implementation procedures.
- b. Calls are returned or forwarded, as appropriate, to demonstrate responsiveness.
- c. Rumors are identified and addressed.

## **G. Evaluation**

1. Demonstrate the ability to conduct a post-exercise critique, to determine areas requiring improvement and corrective action.

### Standard Criteria:

- a. An exercise time line is developed, followed by an evaluation of the objectives against the expectations of the timeline.
- b. Significant problems in achieving the objectives are discussed to ensure understanding of why objectives were not fully achieved.
- c. Areas requiring improvement are entered in the stations corrective action program.