

## CCNPP3eRAIPEm Resource

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**Cc:** CCNPP3eRAIPEm Resource; Segala, John; Wilson, Anthony; Vrahoretis, Susan; Williams, Kevin; Bowers, Anthony; Miernicki, Michael; McLellan, Judith  
**Subject:** CCNPP3 - Draft RAI 372 NSIR EP 6711  
**Attachments:** DRAFT RAI 372 NSIR EP 6711.doc

Attached is Draft RAI No. 372 (eRAI No. 6711) pertaining to sections 13.3 of the Calvert Cliffs Unit 3 FSAR. You have until September 24, 2012 to review the draft questions and decide whether you need a conference call to discuss the RAI before the final issuance. After the clarification phone call or after September 24, 2012, the RAI will be finalized and sent to you for your response. You will then have 30 days to provide a technically complete response or an expected response date for the RAI.

Thanks

**SURINDER ARORA, PE**  
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## Request for Additional Information 372 (eRAI 6711)

DRAFT

Issue Date: 9/10/2012

Application Title: Calvert Cliffs Unit 3 - Docket Number 52-016

Operating Company: UniStar

Docket No. 52-016

Review Section: 13.03 - Emergency Planning

Application Section: Part 5 - Emergency Plan

### QUESTIONS

#### 13.03-52

Subject: Impediments to the Development of Emergency Plans

FSAR Section 2.2, "Nearby, Industrial, Transportation, and Military Facilities," of the CCNPP Unit 3 COL application concludes that based on the analysis of the effects of Design-Basis Events which describes the hazards surrounding the site in Chapter 2.0, "Site Characteristics," and Chapter 2.2, no impediment was found to hamper, limit, or not allow an adequate physical security plan to be developed for CCNPP Unit 3. This conclusion does not exist in the FSAR for development of the CCNPP Unit 3 Emergency Plan. Section 1.3, "Preliminary Activities," of the Evacuation Time Estimate Report states, in part, that the entire highway system within the Emergency Planning Zone (EPZ) and for some distance outside, was driven while characteristics of each section of the highway were recorded. These characteristics include unusual characteristics such as narrow bridges, sharp curves, poor pavement, flood warning signs, and inadequate delineations.

**Explain the significance of the unusual characteristics of the highway system identified within the EPZ and for some distance outside of the EPZ, and how they impact access to or from the proposed CCNPP Unit 3 site. In addition, address whether any unusual characteristics unique to the proposed site could pose a significant impediment to the development of the CCNPP Unit 3 Emergency Plan.**

#### 13.03-53

Subject: Onsite Emergency Organization

Based on the staff's review of the applicant's prior responses to RAIs (i.e., Question 13.03-40(B)) and the language contained in the CCNPP Unit 3 Emergency Plan (e.g., Section H.4 and Table B-1b footnote), the staff concludes that the applicant did not provide an adequate basis for the elimination of 30-minute responders proposed in Table B-1b. Specifically, the applicant's justification for the elimination of 30-minute responders includes several statements that do not provide the staff with assurances that minimum on-shift and augmented staffing can be activated timely following the declaration of an emergency at CCNPP Unit 3. These statements include references to the "unlikelihood of a radiological event occurring," the "unlikelihood of fuel damage or a radiological release," the "lack of significance of performing a function at the onset of an event with no threat," and an inability to augment staffing in 60 minutes due to weather conditions and traffic.

The staff expects the applicant for the proposed CCNPP Unit 3 site to provide an adequate description of its augmentation capability in its emergency plan and responses to RAIs, without regard to the likelihood whether an event will occur, radiological conditions, time of day, weather conditions, and availability of personnel. With that said, the staff recognizes that circumstances not under the applicant's control may occasionally cause a delay in gathering the required minimum number of staff. However, the persistent inability to meet the minimum staffing commitment by the applicant within the specified timeframes during drills, exercises, and actual events, for whatever cause, is a regulatory concern that warrants corrective action.

**Provide an adequate justification for the elimination of 30-minute responders and revise the cited language to clearly reflect the basis for the augmentation capability.**

### **13.03-54**

Subject: Emergency Action Levels

A. Upon the staff's review of the application contents related to the Emergency Classification System, the staff has determined that the justification for revision of the initiating conditions for SU3, SA4, and SS6 regarding loss of safety system annunciation/indication needs to be enhanced in order for the staff to reach an independent decision of reasonable assurance. **Please revise Section D of the CCNPP Unit 3 Emergency Plan accordingly or provide justification of why this is not necessary.**

B. Section D of the application submittal states, in part, that new loss of digital I&C EALs have been developed by AREVA for the U.S. EPR. **Provide the proposed new EALs, or EAL sets, in the same format as NEI 07-01, which include (as applicable) the initiating condition, operating modes, notes, EAL threshold(s), basis information, and developer guidance for how a particular set-point is (or will be) determined associated with digital I&C. Please revise accordingly or provide justification of why this is not necessary.**

C. There are two generic EAL scheme development guidance documents currently endorsed by the NRC for industry to use in the development of their site-specific EAL schemes; NEI 99-01 which is applicable to non-passive reactor designs, and NEI 07-01 which is applicable to the AP1000 and ESBWR reactor designs. Licensees/applicants cannot simultaneously commit, or even reference, both documents. As CCNPP has developed its EAL scheme consistent NEI 99-01 revision 5, Section D of the application submittal states, in part, the new loss of digital I&C EALs have been developed consistent with NEI 07-01, Revision 0, digital I&C EALs for passive reactor designs. **Please revise the Emergency Plan to reflect the EALs developed in accordance with NEI 99-01 revision 5.**

D. Section D.3, "Offsite Classification System," of the CCNPP Unit 3 Emergency Plan states that the initial EALs will be discussed with and agreed upon by the State and local authorities and approved by the NRC. Thereafter, the content of the EALs shall be reviewed with the State and local authorities on an annual basis. Part 10 of the CCNPP Unit 3 COL application, "Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) and ITAAC Closure," License Condition 8, "Emergency Action Levels," states the following:

Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC} shall submit a complete set of plant-specific Emergency Action Levels (EALs) for {CCNPP Unit 3} in accordance with NEI 99-01 Revision 5 to the NRC for confirmation at least 180 days prior to initial fuel load. The submitted EALs will be written with no deviations other than those attributable to specific U.S. EPR reactor design considerations.

**Please revise proposed license condition 8 in Part 10 of the CCNPP Unit 3 COL application to include State and local government review and approval of the final (complete) EALs to be submitted to the NRC.**

### **13.03-55**

Subject: Notification Methods and Procedures

Section E.6, "Notification of the Public," of the CCNPP Unit 3 Emergency Plan describes the capabilities for prompt notification of the general public within the Plume Exposure Pathway emergency planning zone and states, in part, that the Public Alert and Notification System (PANS) consists of fixed sirens and "may" also include Tone Alert Radio, Reverse 911 calling, and vehicles with PA systems.

**Clarify in the Emergency Plan whether the capability to alert the public of an emergency at CCNPP Unit 3 exists and will be implemented through the use of tone alert radios, reverse 911**

calling, and vehicles with PA systems, in addition to a system of fixed sirens.

### 13.03-56

Subject: Emergency Facilities and Equipment

A. In response to Question 13.03-13(B), the applicant proposed to revise the CCNPP Unit 3 Emergency Plan Section H.2, "Emergency Operations Facility (EOF)," to include the name of the facility to be shared with CCNPP Units 1 and 2, and its physical location in relation to CCNPP Unit 3. Specifically, the applicant committed to revise Section H.2 to include a statement that the EOF is located about twelve miles from the site, in Calvert Industrial Park, Skipjack Road at Hallowing Point Road. The NRC staff could not verify that this proposed revision was completed in Revision 7 to the CCNPP Unit 3 Emergency Plan.

**Provide a revision to the CCNPP Unit 3 Emergency Plan with the proposed changes as included in response to Question 13.03-13(B).**

B. Section H.12, "Collection Point for Field Samples," of the CCNPP Unit 3 Emergency Plan states that the onsite chemistry lab is the central point for the receipt and analysis of radiological field monitoring samples. Section C.3, "Radiological Laboratories," of the CCNPP Unit 3 Emergency Plan states the onsite laboratory is the central point for receipt and analysis of all onsite samples.

**Clarify in the CCNPP Unit 3 Emergency Plan the central location for the receipt and analysis of all field monitoring data (onsite and offsite) and coordination of sample media.**

### 13.03-57

Subject: Accident Assessment

A. Section I.4, "Effluent Monitor Data and Dose Projection," of the CCNPP Unit 3 Emergency Plan states, in part, that a computerized dose assessment program with similar capabilities and outputs as the NRCs Radiological Assessment System for Consequence Analysis (RASCAL) program will be used. In addition, Section I.4 of the CCNPP Unit 3 Emergency Plan states that monitored effluent points and system flow rates, release point samples, monitoring team data, and meteorological information will be used to estimate doses by computer methods. The methods used to project offsite doses are included. The computer applications are evaluated against the Environmental Protection Agency, EPA-400 plume exposure protective action guidelines (PAGs) for the early phase of an accident to determine the necessity for offsite protection action recommendations (PARs).

**1. Clarify in the CCNPP Unit 3 Emergency Plan whether the computerized dose assessment program results versus computer applications are evaluated against EPA-400 to determine whether PARs are necessary.**

**2. Describe in the CCNPP Unit 3 Emergency Plan the specific computerized dose assessment program or platform to be used by dose assessment personnel, including its suitability for the specific climatological and terrain conditions representative at the CCNPP Unit 3 site (consistent with the guidance in NUREG-0654/FEMA-REP1, Appendix 2 – pp 2-2 & 2-3).**

B. The Unit 3 CCNPP Emergency Plan, as proposed, contains references to procedures in Section I, "Accident Assessment," and Appendix 2, "Procedure Cross-Reference to NUREG-0654," that will be used by dose assessment personnel during an emergency to rapidly assess radiological hazards onsite and offsite, including the capability to continuously assess the consequences of an accident thereafter. **Since these procedures have not been written,**

**describe in the emergency plan the information that will be contained in these procedures to demonstrate the applicant's compliance with NRC regulation (10 CFR 50.47(b)(9)).**

C. Section I.8, "Monitoring Teams," of the CCNPP Unit 3 Emergency Plan states, in part, that radiological survey and sample data is transmitted to the emergency facilities. Vendor/contractor support can be used to perform collection, shipment, and analysis of environmental sample media as described in Section B.8.c. describes the roles and responsibilities of the American Nuclear Insurers. **Revise the CCNPP Unit 3 Emergency Plan to reference Section B.8.d, "Environmental Monitoring Services," or provide justification for why this change is not necessary.**

### **13.03-58**

Subject: Supporting Plans

In Question 13.03-09(A), the staff requested the applicant revise the CCNPP Unit 3 Emergency Plan to reflect the change to the National Response Plan (NRP) currently known as the National Response Framework (NRF). In response, the applicant committed to revise Sections A.1 and C.1 of the emergency plan to reflect this change. However, upon the staff's review of Revision 7 to the CCNPP Unit 3 Emergency Plan, it appears that Section P.6, "Supporting Emergency Response Plans," makes reference to the NRP rather than the corrected NRF. **Please revise the CCNPP Unit 3 Emergency Plan accordingly, or provide justification for why this change is not necessary.**