

## CCNPP3eRAIPEm Resource

---

**From:** Arora, Surinder  
**Sent:** Wednesday, November 21, 2012 10:31 AM  
**To:** Infanger, Paul; UNECC3Project@unistarnuclear.com  
**Cc:** CCNPP3eRAIPEm Resource; Segala, John; Wilson, Anthony; Kavanagh, Kerri; Crane, Samantha; Jaffe, David; Ford, Tanya; McLellan, Judith  
**Subject:** CCNPP3 - Final RAI 374 CMVB 6785  
**Attachments:** FINAL RAI 374 CMVB 6785.doc

Paul,

Attached is Final RAI No. 374 (eRAI No. 6785) pertaining to section 14.2 of the Calvert Cliffs Unit 3 FSAR. The draft of this RAI was issued on October 2, 2012. As requested by UniStar, a clarification phone call on the draft question was held on November 15, 2012. The “final” version of the RAI incorporates minor changes to the draft question as agreed upon during the clarification call.

The schedule that we have established for review of your application assumes that your technically complete response to the RAI question or a schedule for providing the response must be received within 30 days of the final RAI. Please note that if you are providing a response schedule in lieu of the technically complete response, the staff will re-evaluate the completion schedule of the chapter based on your proposed response date.

Additionally, please make sure that your response letter includes a statement whether or not your response contains any sensitive or proprietary information.

Thanks.

**SURINDER ARORA, PE**  
**PROJECT MANAGER,**  
**Office of New Reactors**  
**US Nuclear Regulatory Commission**

Phone: 301 415-1421  
FAX: 301 415-6406  
Email: [Surinder.Arora@nrc.gov](mailto:Surinder.Arora@nrc.gov)

**Hearing Identifier:** CalvertCliffs\_Unit3Col\_RAI  
**Email Number:** 281

**Mail Envelope Properties** (B46615B367D1144982B324704E3BCEEDCAAF0C2AE4)

**Subject:** CCNPP3 - Final RAI 374 CMVB 6785  
**Sent Date:** 11/21/2012 10:30:37 AM  
**Received Date:** 11/21/2012 10:30:38 AM  
**From:** Arora, Surinder

**Created By:** Surinder.Arora@nrc.gov

**Recipients:**

"CCNPP3eRAIPEm Resource" <CCNPP3eRAIPEm.Resource@nrc.gov>  
Tracking Status: None  
"Segala, John" <John.Segala@nrc.gov>  
Tracking Status: None  
"Wilson, Anthony" <Anthony.Wilson@nrc.gov>  
Tracking Status: None  
"Kavanagh, Kerri" <Kerri.Kavanagh@nrc.gov>  
Tracking Status: None  
"Crane, Samantha" <Samantha.Crane@nrc.gov>  
Tracking Status: None  
"Jaffe, David" <David.Jaffe@nrc.gov>  
Tracking Status: None  
"Ford, Tanya" <Tanya.Ford@nrc.gov>  
Tracking Status: None  
"McLellan, Judith" <Judith.McLellan@nrc.gov>  
Tracking Status: None  
"Infanger, Paul" <paul.infanger@unistarnuclear.com>  
Tracking Status: None  
"UNECC3Project@unistarnuclear.com" <UNECC3Project@unistarnuclear.com>  
Tracking Status: None

**Post Office:** HQCLSTR01.nrc.gov

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	1235	11/21/2012 10:30:38 AM
FINAL RAI 374 CMVB 6785.doc		43002

**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

## Request for Additional Information 374 (eRAI 6785)

Issue Date: 11/21/2012

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

Operating Company: UniStar

Docket No. 52-016

Review Section: 14.02 - Initial Plant Test Program - Design Certification and New License Applicants

Application Section: 14.2

### QUESTIONS

14.02-60

Consistent with the guidance in RG 1.206, Regulatory Position C.III.4.3, "Combined License Information Items That Cannot Be Resolved Before the Issuance of a License," the applicant identified in the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 FSAR Table 13.4-1, "Operational Programs Required by NRC Regulation and Program Implementation," Item 19, Initial Test Program (ITP) activities that will be subject to a license condition. In addition to the ITP activities identified in Table 13.4-1, the NRC staff has identified the post-COL items concerning FSAR Section 14.2, "Initial Test Program," as license conditions.

In Part 10 of the Calvert Cliffs Nuclear Plant Project (CCNPP) Units 3 COLA the applicant proposed the following Proposed Combined License Conditions (PLC) for the ITP:

#### **PROPOSED LICENSE CONDITION [PLC-2]:**

Each COL item identified below shall be completed by the identified implementation milestone through completion of the action identified.

COL Item 14.2-2 in Section 14.2.11

{Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC} shall develop a test program that considers the components identified in FSAR Section 14.2.11 and shall provide copies of approved test procedures to the NRC at least 60 days prior to their scheduled performance date.

COL Item 14.2-6 in Section 14.2.12

The natural circulation test (Test #196) will be performed prior to fuel load or justification will be provided for not performing the test. The need to perform the test will be based on evaluation of previous natural circulation test results and a comparison of reactor coolant system (RCS) hydraulic resistance coefficients applicable to normal flow conditions.

COL Item 14.2-11 in Section 14.2.9

Specific operator training and participation, as described in the U.S. EPR FSAR Section 14.2.9 will be conducted.

#### **OPERATIONAL PROGRAM IMPLEMENTATION [PLC-3]**

The provisions of the regulations address implementation milestones for some operational programs. The NRC will use license conditions to ensure implementation for those operational programs whose implementation is not addressed in the regulations. COL application FSAR Table 13.4-1 identifies several programs required by regulations that must be implemented by a milestone to be identified in a license condition.

#### **PROPOSED LICENSE CONDITION:**

{Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC} shall implement the programs or portions of programs identified in FSAR Table 13.4-1 on or before the associated milestones in FSAR Table 13.4-1.

#### **OPERATIONAL PROGRAM READINESS [PLC-6]**

The NRC inspection of operational programs will be the subject of the following license condition in accordance with SECY-05-0197.

**PROPOSED LICENSE CONDITION:**

{Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC} shall submit to the appropriate Director of the NRC, a schedule, no later than 12 months after issuance of the COL, that supports planning for and conduct of NRC inspections of operational programs listed in the operational program FSAR Table 13.4-1. The schedule shall be updated every 6 months until 12 months before scheduled fuel loading, and every month thereafter until either the operational programs in the FSAR table have been fully implemented or the plant has been placed in commercial service, whichever comes first.

**STARTUP TESTING [PLC-7]**

COL application FSAR Section 14.2 specifies certain startup tests that must be completed after fuel load. Operating licenses typically have included the following condition related to startup testing.

**PROPOSED LICENSE CONDITION:**

Any changes to the Initial Startup Test Program described in Chapter 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 or the relevant portions of Part 52 for the U.S. EPR Design Certification after rulemaking shall be reported in accordance with 50.59(d) within one month of such change.

The staff found that the section of PLC-2 related to COL Item 14.2-11 in Section 14.2.9 and COL Item 14.2-6 in Section 14.2.12 is adequate. However, portions of PLC-2, PLC-3, PLC-6 and PLC-7 are not adequate and require revision, consistent with the standard license conditions issued to other applicants in the attachment.

Please revise PLC-2, PLC-3, PLC-6 and PLC-7 using the attached standard conditions.

Attachment: As stated

## **Attachment to RAI 374 (eRAI 6785)**

### **Standard Proposed License Conditions for the Initial Test Program**

#### **License Condition for Preoperational and Startup Test Procedures**

During the post-licensing period, preoperational and startup test procedures will be subject to a license condition for NRC inspections to verify that the licensee implements the ITP. This process shall allow for the performance of necessary plant as-built inspections and walk downs. Therefore, the licensee shall develop a test program that considers the components identified in FSAR Section 14.2.11 and shall make available to on-site NRC inspectors preoperational and startup test specifications and test procedures 60 days prior to their intended use.

#### **License Condition for the Power Ascension Test Phase**

Certain milestones in the startup testing phase of the ITP (e.g., pre-critical testing, criticality testing, and low-power testing) should be controlled through this license condition to ensure that the designated licensee management reviews, evaluates, and approves relevant test results before proceeding to the next power ascension test phase. Accordingly, the licensee shall perform the following:

(a) Complete all pre-critical and criticality testing and confirm that the test results are within the range of values predicted in the FSAR acceptance criteria. After completing and evaluating criticality test results, the licensee will conduct low-power tests and will operate the facility at reactor steady-state core power levels not in excess of 5 percent power, in accordance with the conditions of the license.

(b) Complete all low-power testing and confirm that the test results are within the range of values predicted in the acceptance criteria in the facility's FSAR. After completing and evaluating low-power test results, the licensee will conduct power ascension testing and will operate the facility at reactor steady-state core power levels not in excess of 100 percent power, in accordance with the conditions of the license.

The licensee is responsible for the review and evaluation of the adequacy of test results in these reports, as well as final review of overall test results in these reports. Test results, which do not meet acceptance criteria, are identified and corrective actions and retests are performed. These reports shall be made available to on-site NRC inspectors.

#### **License Condition for the Test Program Schedule**

The licensee shall submit to the appropriate Director of the NRC, a schedule, no later than 12 months after issuance of the COL, that supports planning for and conduct of NRC inspections of operational program listed in the operational program CCNPP Unit 3 COL FSAR Table 13.4-1, Item 19, Initial Test Program. The schedule shall be updated every 6 months until 12 months before scheduled fuel loading, and every month thereafter until either the operational program in the CCNPP Unit 3 COL FSAR Table 13.4-1, Item 19 have been fully implemented or the plant has been placed in commercial service, whichever comes first.

#### **License Condition for Test Changes**

Within one month of any ITP changes described in CCNPP Units 3 FSAR Section 14.2, the licensee shall evaluate these changes in accordance with the provisions of 10 CFR 50.59 or Section VIII of the appropriate appendix for the EPR DCD under 10 CFR Part 52 and report them in accordance with 10 CFR 50.59(d).