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10 CFR 50.4  
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December 17, 2009

UN#09-515

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

Subject: UniStar Nuclear Energy, NRC Docket No. 52-016  
Updated Response to Request for Additional Information for the  
Calvert Cliffs Nuclear Power Plant, Unit 3,  
RAI No. 44, Revision 3, Radiation Protection Design Features

- References:
- 1) John Rycyna (NRC) to Robert Poche (UniStar Nuclear Energy), "RAI No 44 CHPB 1567.doc (P)," email dated January 6, 2009
  - 2) UniStar Nuclear Energy Letter UN#09-108, from Greg Gibson to Document Control Desk, U.S. NRC, Submittal of Response to RAI No. 44, Revision 3, Radiation Protection Design Features, dated February 6, 2009

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 January 6, 2009 (Reference 1). This RAI addresses the Radiation Protection Design Features, as discussed in Section 12.3 of the Final Safety Analysis Report (FSAR), as submitted in Part 2 of the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 Combined License Application (COLA), Revision 6.

The initial response to RAI 44, Question 12.03-12.04-1 (Reference 2), stated that the CCNPP Unit 3 COLA would be updated to incorporate NEI 08-08, Generic FSAR Template Guidance for Life Cycle Minimization of Contamination, following its incorporation into the U.S. EPR FSAR.

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The enclosure provides our updated response to RAI 44, Question 12.03-12.04-1, and includes revised COLA content. A Licensing Basis Document Change Request has been initiated to incorporate these changes into a future revision of the COLA.

Our response does not include any new regulatory commitments. This letter does not contain any sensitive or proprietary information.

If there are any questions regarding this transmittal, please contact me at (410) 470-4205, or Mr. Michael J. Yox at (410) 495-2436.

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

Executed on December 17, 2009



Greg Gibson

Enclosure: Updated Response to NRC Request for Additional Information, RAI 44, Question 12.03-12.04-1, Radiation Protection Design Features, Calvert Cliffs Nuclear Power Plant, Unit 3

cc: Surinder Arora, NRC Project Manager, U.S. EPR Projects Branch  
Laura Quinn, NRC Environmental Project Manager, U.S. EPR COL Application  
Getachew Tesfaye, NRC Project Manager, U.S. EPR DC Application (w/o enclosure)  
Loren Plisco, Deputy Regional Administrator, NRC Region II (w/o enclosure)  
Silas Kennedy, U.S. NRC Resident Inspector, CCNPP, Units 1 and 2  
U.S. NRC Region I Office

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**Enclosure**

**Updated Response to NRC Request for Additional Information  
RAI 44, Question 12.03-12.04-1, Radiation Protection Design Features,  
Calvert Cliffs Nuclear Power Plant, Unit 3**

**RAI No. 44**

**Question 12.03-12.04-1**

The NRC has sent RAIs requesting the US EPR design certification applicant to provide a general description of how each of the main design objectives contained in Regulatory Guide 4.21 will be met in the generic design. The US EPR design certification applicant was also requested to address the objectives that are more operational or procedural in nature by providing COL information items in the appropriate sections of the US EPR design control document (DCD) for COLAs referencing the US EPR design.

A detailed description of how the COL information items contained in the US EPR DCD will be resolved should be included in the appropriate sections of the Calvert Cliffs COLA FSAR where applicable, with a listing addressing each of these COL information items in Section 12.3 of the Calvert Cliffs COLA FSAR. For example, an acceptable description of a groundwater monitoring program should include implementation considerations and a description of the key components of the program, such as types and periodicity of routine samples to be taken, threshold activities to be detected, actions to be taken upon detection of leakage into the groundwater, and a description of quality assurance practices to be used to ensure reasonable assurance of prompt identification of leakage into the groundwater.

Using the guidance provided in Regulatory Guide 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life Cycle Planning" (June 2008), provide a description of all of the operational programs and how the facility's procedures for operations will meet the requirements of 10 CFR 20.1406 (a)-minimize to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste. Alternatively, justify another approach.

**Response**

The following information was provided by AREVA NP in their response to U.S. EPR FSAR RAI 23, Supplement 2, Question 12.03 – 12.04-1, Parts A and B<sup>1</sup>:

In accordance with the Radiation Protection Program milestones and license conditions, the facility will maintain an operational lifecycle minimization of contamination program that is based on NEI 08-08A, "Generic FSAR Template Guidance for Life-Cycle Minimization of Contamination."

NEI 08-08A provides generic guidance for lifecycle minimization of contamination and is an acceptable method for a COL applicant to demonstrate compliance with NRC regulatory requirements, guidance, and acceptable criteria listed in 10 CFR 20.1406, Regulatory Guide (RG) 1.206, RG 4.21 and NUREG-0800, Section 11 and Section 12.

U.S. EPR Tier 2, Section 12.3 and Section 12.5 will be revised to include a reference to NEI 08-08A.

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<sup>1</sup> AREVA NP Response to U.S. EPR Design Certification Application RAI No. 23, FSAR Ch 12, Supplement 2, dated 12/3/09 (ML093390005)

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U.S. EPR FSAR Sections 12.3, Radiation Protection Design Features, and 12.5, Operational Radiation Protection Program, are incorporated by reference into the CCNPP Unit 3 COLA. Therefore, the inclusion of a reference to NEI 08-08A within U.S. EPR FSAR Sections 12.3 and 12.5 is also incorporated by reference into COLA FSAR Section 12.3 and 12.5. Additionally, COLA FSAR Table 13.4-1, Item 10, will be updated to include a source reference to 10 CFR 20.1406 for the Radiation Protection Program.

**COLA Impact**

FSAR Table 13.4-1 will be updated as follows in a future COLA revision:

**Table 13.4-1—{Operational Programs Required by NRC Regulations and Program Implementation}**

Item	Program Title	Source	FSAR	Implementation	
		(Required By)	Section	Milestones	Requirements
9	Process and Effluent Monitoring and Sampling Program:		Note 1		
	Radiological Effluent Technical Specifications / Standard Radiological Effluent Controls	10 CFR 20.1301 and 20.1302; 10 CFR 50.34a; 10 CFR 50.36a; 10 CFR 50, App. I, Sect. II and IV	11.5	Prior to initial fuel load	License Condition
	Offsite Dose Calculation Manual	Same as above	11.5	Prior to initial fuel load	License Condition
	Radiological Environmental Monitoring Program	Same as above	11.5	Prior to initial fuel load	License Condition
	Process Control Program	Same as above	11.4	Prior to initial fuel load	License Condition
10	Radiation Protection Program	10 CFR 20.1101 <u>10 CFR 20.1406</u>	12.5  Note 1	<p>Prior to receipt of by-product, source, or special nuclear material (excluding Exempt Quantities as described in 10 CFR 30.18) for those elements of the Radiation Protection Program (RPP) necessary to support such receipt</p> <p>Prior to receipt of fuel onsite for those elements of the RPP necessary to support such receipt</p> <p>Prior to initial fuel load for those elements of the RPP necessary to support fuel load and plant operation</p> <p>Prior to first shipment of radioactive waste for those elements of the RPP necessary to support such shipment</p>	License Condition