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April 30, 2009

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

Subject: UniStar Nuclear Energy, NRC Docket No. 52-016
Response to Request for Additional Information for the
Calvert Cliffs Nuclear Power Plant, Unit 3,
RAI No. 53, Question 12.05-1, Operational Radiation Protection Program

- References:
- 1) John Rycyna (NRC) to Robert Poche (UniStar), "RAI No. 53 CHPB 1852.doc" email dated January 29, 2009
 - 2) UniStar Nuclear Energy Letter UN#09-148, from Greg Gibson to Document Control Desk, U.S. Nuclear Regulatory Commission, Response to RAI No. 53, Question 12.05-1, Operational Radiation Protection Program, dated March 30, 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 Energy, dated January 29, 2009 (Reference 1). This RAI addresses the Operational Radiation Protection Program, as discussed in Section 12.5 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 4.

In the UniStar Nuclear Energy letter (Reference 2) it was stated that a response to RAI 53, Question 12.05-1 would be provided by April 30, 2009. The enclosure provides our response to RAI No. 53, Question 12.05-1. COLA impacts associated with this RAI response are noted with the question response.

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A Licensing Basis Document Change Request has been initiated to incorporate these changes into a future revision of the COLA. Our response to Question 12.05-1 does not include any new regulatory commitments.

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 April 30, 2009

Christian Clement
for Greg Gibson



Greg Gibson

Enclosure: Response to NRC Request for Additional Information, RAI No. 53, Question 12.05-1, Operational Radiation Protection Program, Calvert Cliffs Nuclear Power Plant, Unit 3

cc: John Rycyna, NRC Project Manager, U.S. EPR COL Application
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

Enclosure

**Response to NRC Request for Additional Information
RAI No. 53, Question 12.05-1, Operational Radiation Protection Program
Calvert Cliffs Nuclear Power Plant, Unit 3**

RAI No. 53

Question 12.05-1

1. The applicant's FSAR Section 12.5 includes a commitment to the use of the NEI Template 07-03, Generic FSAR Template Guidance for Radiation Protection Description to describe, at the functional level, elements of the radiation protection program required by 10 CFR 20.1101. Upon final NRC acceptance of NEI Template 07-03, verify that the applicant will update the commitment of FSAR Section 12.5 to reference the final version of this template (or otherwise update the FSAR to address any differences from this final template version), consistent with RG 1.206 and Section 12.5 of the Standard Review Plan (NUREG 0800), or justify an alternative. Accordingly, the applicant should update all internal citations to the final NEI Template 07-03 in applicable FSAR subsections and references.

2. NEI template 07-03 contains two sections that specify site specific information that should be provided by the applicant to supplement the template. In accordance with the guidance provided in NEI 07-03, provide site-specific information in the following areas:

- a) Descriptions of Very High Radiation Area (VHRA) locations and physical barriers as well as VHRA administrative access controls.
- b) A reference to the site specific document containing quality assurance criteria for the radiation protection program

NEI template 07-03 also contains several sections that allow for site-specific alterations. Provide descriptions of any design or site-specific information for these areas. Areas that may include deviations include:

- a) Alternative staff assigned to specific Radiation Protection Responsibilities.
- b) Alternative or additional Radiation Protection Facilities. Also, list facilities listed in the template that will be located off site and functions that will be carried out at another location or through a vendor.
- c) Modified radiation protection monitoring instrumentation or equipment.
- d) Use of special use respirator filters and disposable supplied air suits.
- e) Alternate or additional procedures for maintaining exposures as low as reasonably achievable.

Response

- 1. Calvert Cliffs Nuclear Power Plant (CCNPP), Unit 3, Combined License Application (COLA) will be updated to incorporate NEI 07-03, Generic FSAR Template Guidance for Radiation Protection Program Description, once it is accepted by the NRC. Internal citations to the published accepted template in the applicable FSAR subsections and references will be updated.

2. Site Specific Information

- a. U.S. EPR FSAR Section 12.3.1.8 provides descriptions and locations of Very High Radiation Areas (VHRA). CCNPP Unit 3 COLA, Part 2, Final Safety Analysis Report (FSAR), Section 12.3.1, incorporates Section 12.3.1.8 of the U.S. EPR FSAR by reference. VHRA are designed to be generally inaccessible, in compliance with 10 CFR 20.1602. The administrative control of access to VHRA shall institute additional measures to ensure that an individual is not able to gain unauthorized or inadvertent access to VHRA. These areas include equipment compartments in the reactor building (spreading area, reactor cavity, core internals storage area, instrument lance storage area and the fuel transfer pit) and certain areas in the Fuel Building (fuel transfer pit, spent fuel pool and the cask loading pit). Keys for VHRA and Locked High Radiation Areas (LHRA) will be kept in a secure configuration (e.g., lock box) approved by the Radiation Protection Manager.
- b. The CCNPP Unit 3 radiation protection program will be conducted under procedures consistent with the guidance of RG 1.33, Appendix A. These procedures include:
 - Control of Radioactivity,
 - Access Control to Radiation Areas Including a Radiation Work Permit System,
 - Radiation Surveys,
 - Airborne Radioactivity Monitoring,
 - Contamination Control,
 - Respiratory Protection,
 - Training in Radiation Protection,
 - Personnel Monitoring,
 - Bioassay Program ,
 - Implementation of ALARA Program, and
 - Control of Measuring and Test Equipment and for Surveillance Tests, Procedures, and Calibrations.

Consistent with RG 1.206, Section C.III.1 Chapter 12 and FSAR Chapter 13, the radiation protection program is considered an operational program and therefore these procedures are required to be in place prior to initial receipt of byproduct, source, or special nuclear materials.

Regarding NEI 07-03, Revision 7, the template allows for alternative information where the applicant may provide site-specific descriptions and content. The following are site-specific responses to these allowed alterations:

- Section 12.5.4.4, *Access Control*, states that the applicant should describe each VHRA, (including the reason for access to the areas) as well as refer to its location on plant layout diagrams. Furthermore, the frequency of entry and administrative controls used to restrict access to these areas shall be listed.

U.S. EPR FSAR Section 12.3.1.8 describes the VHRA located in the Reactor and Fuel Buildings; their locations are shown in U.S. EPR FSAR Figures 12.3-1 through 12.3-9.

VHRA that are accessible will be controlled via physical barriers and positive access control, such as VHRA keys kept in a secure configuration (e.g. lockbox) approved by the Radiation Protection Manager. These VHRA are not routinely accessible during operations; access during special circumstances, such as outages, is via the radiation work control program.

- Section 12.5.4.12, *Quality Assurance*, requires a reference to the appropriate section in Chapter 17.

The radiation protection program quality assurance criteria are described in FSAR Section 17.5.

COLA Impact

CCNPP Unit 3 COLA will be updated to incorporate NEI 07-03, Generic FSAR Template Guidance for Radiation Protection Program Description, once the NRC accepts or otherwise endorses the NEI document. All internal citations to the published accepted template in the applicable FSAR subsections and references will be updated.

FSAR Section 12.5 will be updated as follows in a future COLA revision:

This section incorporates by reference NEI 07-03, "Generic FSAR Template Guidance for Radiation Protection Description" (NEI, 2007) with the following supplemental information:

NEI 07-03 Section 12.5.4.4, Access Control.

The U.S. EPR FSAR Section 12.3.1.8 describes the Very High Radiation Areas (VHRA) located in the Reactor and Fuel Buildings; their locations are shown in U.S. EPR FSAR Figures 12.3-1 through 12.3-9. VHRA that are accessible will be controlled via physical barriers and positive access control, such as VHRA keys that are maintained under the control of the Radiation Protection Manager. These VHRA are not routinely accessible during operations; access during special circumstances, such as outages, is via the radiation work control program.

NEI 07-03 Section 12.5.4.12, Quality Assurance.

The Quality Assurance program is described in Section 17.5.