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UniStar
NUCLEAR ENERGY

10 CFR 50.4
10 CFR 52.79

June 8, 2009

UN#09-259

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. 106, AC Power Systems (Onsite)

References:
1) John Rycyna (NRC) to Robert Poche (UniStar Nuclear Energy), "RAI No 106 EEB 2119.doc (PUBLIC)" email dated April 22, 2009

2) UniStar Nuclear Energy Letter UN#09-239, from Greg Gibson to Document Control Desk, U.S. NRC, Submittal of Response to RAI No. 106, AC Power Systems (Onsite), dated May 22, 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 April 22, 2009 (Reference 1). This RAI addresses the AC Power Systems (Onsite), as discussed in Section 8.3 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 4.

Reference 1 requested UniStar Nuclear Energy to respond to the RAI within 30 days. Reference 2 provided a schedule for the expected response dates for Questions 08.03.01-1 and 08.03.01-2.

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NRO

The enclosure provides our response to RAI No. 106, Questions 08.03.01-1 and 08.03.01-2, 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 to Questions 08.03.01-1 and 08.03.01-2 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 June 8, 2009

Greg Gibson

Enclosure: Response to NRC Request for Additional Information, RAI No. 106, Questions 08.03.01-1 and 08.03.01-2, AC Power Systems (Onsite), 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

GTG/JMR/KAT

Enclosure

Response to NRC Request for Additional Information
RAI No. 106, Questions 08.03.01-1 and 08.03.01-2,
AC Power Systems (Onsite)
Calvert Cliffs Nuclear Power Plant, Unit 3

Question 08.03.01-1

FSAR Figure 8.3-1 contains a typo because it shows two 30BDT02 transformers. The Applicant should correct this typo by changing Figure 8.3-1 to show one 30BDT01 transformer and one 30BDT02 transformer.

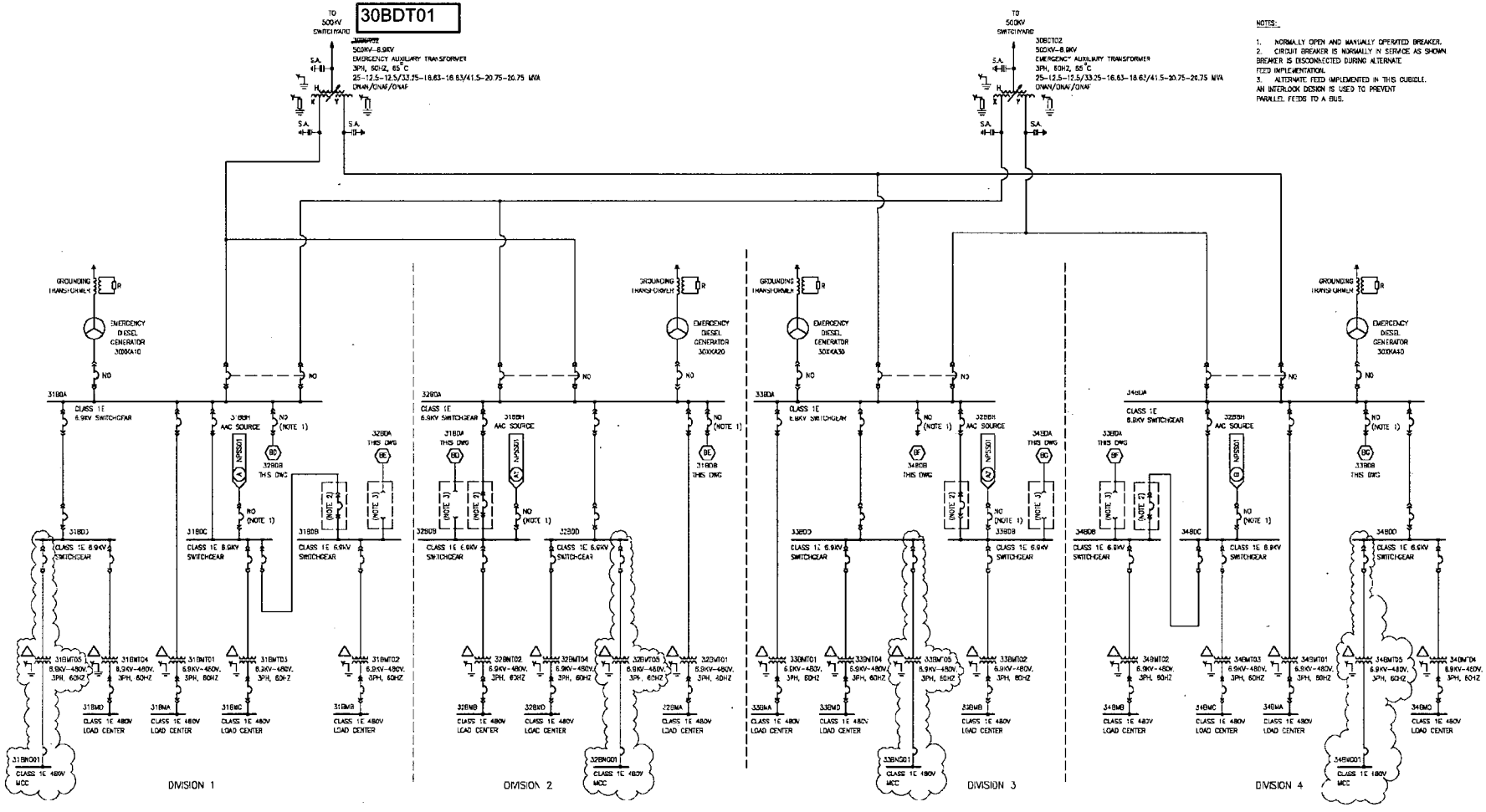
Response
FSAR Chapter 8, Figure 8.3-1, Emergency Power Supply System Single Line Drawing (Sheet 1 of 3), will be revised to change the emergency auxiliary transformer on the left side of the figure from 30BDT02 to 30BDT01.

COLA Impact

FSAR, Chapter 8, Figure 8.3-1 (Sheet 1 of 3), will be revised as shown on the following figure in a future COLA revision:

Figure 8.3-1—{CCNPP Unit 3 Emergency Power Supply System Single Line Drawing}

(Page 1 of 3)



Question 08.03.01-2

The U.S. EPR FSAR COL Item # 8.3-1 is addressed by the applicant in Section 8.3.1.1.5 as follows: "{Constellation Generation Group and UniStar Nuclear Operating Services} shall monitor and maintain [emergency diesel generator] EDG reliability to verify the selected reliability level goal of 0.95 is being achieved as intended by Regulatory Guide 1.155 (NRC, 1988)." This (EDG) reliability program is not listed in Table 13.4-1 and, therefore, there is no milestone date. U.S.EPR Tier 1 ITAAC Table 3.2-1 however, indicates that a Reliability Program is required of the applicant. Please explain what processes and programs will be utilized in assuring that this EDG reliability goal can be met.

Response

The milestone date for the Emergency Diesel Generator (EDG) reliability is located in CCNPP Unit 3, COLA, Revision 4, Part 10, Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) and ITAAC Closure, Appendix A, Proposed Combined License Conditions. In Section 2, COL ITEMS, of Appendix A, the following COL Item 8.3-1 is discussed as follows:

> COL Item 8.3-1 in Section 8.3.1.1.5
>
> Prior to initial fuel load, {Calvert Cliffs 3 Nuclear Project and UniStar Nuclear Operating Services} shall establish procedures to monitor and maintain Emergency Diesel Generator reliability to verify the selected reliability level goal of 0.95 is being achieved as intended by Regulatory Guide 1.155.

The operational programs listed in CCNPP Unit 3 COL application Table 13.4-1 are those required by regulations and subject to program implementation license conditions. The table includes each of the operation programs listed in Section C.I.13.4, Operational Program Implementation, of Regulatory Guide 1.206, dated June 2007.

Further detail, information and background for the EDG reliability program is as follows:

EDG reliability described in RG 1.155 Regulatory Position C.1.1 is accomplished through the selection of a target EDG reliability, and monitoring and maintaining the selected reliability.

The EDG reliability is established through the initial test program and monitored through the CCNPP Unit 3 surveillance testing procedures and post-maintenance testing. U.S. EPR FSAR Section 14.2.12.9.14 requires performance of 25 consecutive EDG start and load tests. The initial test program demonstrates that an acceptable level of reliability has been achieved to place a new EDG into an operational category consistent with RG 1.9, Position C.2.3.1 and IEEE Std 387-1995, Section 7.3.

Continued monitoring of EDG reliability to assure that the target is being achieved is accomplished through the life of the plant through compliance with the maintenance rule program. For example, RG 1.160 Section B states the EDG target reliability values could be used as a goal or as a performance criterion under the maintenance rule. NUMARC 1993-01, Revision 2, Section 9.4 also states that the EDG docketed reliability target provides a baseline for testing and surveillance activities under the maintenance rule.

Additionally, the major elements of an EDG reliability program as described in IEEE 387-1995, Annex D, as endorsed by RG 1.9, will be utilized. For example, procedures, surveillances, training, monitoring and trending, and failure resolution contribute to the overall EDG reliability program. Engine and generator operating parameters and surveillances associated with degraded performance and aging will be trended, where such trending could detect incipient failures and permit corrective maintenance before the actual failure occurs. The corrective action program includes failure identification, analysis for failure root cause, and correction. The analysis has the intent to reduce failures by identifying corrective actions to prevent future failures.

U.S. EPR FSAR Tier 1 ITAAC Table 3.2-1 indicates, "A Reliability Assurance Program Exists and provides reasonable assurance that the overall plant reliability is maintained." The reliability assurance program for Calvert Cliffs Nuclear Power Plant Unit 3 is described in CCNPP Unit 3 FSAR Section 17.4.

COLA Impact

The COLA FSAR will not be revised as a result of this response.