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# CENG<sup>SM</sup>

a joint venture of



Constellation  
Energy



CALVERT CLIFFS  
NUCLEAR POWER PLANT

November 26, 2012

U. S. Nuclear Regulatory Commission  
Washington, DC 20555

**ATTENTION:** Document Control Desk

**SUBJECT:** Calvert Cliffs Nuclear Power Plant  
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318  
Supplemental Information re: Application for Technical Specification  
Improvement to Adopt TSTF-501-A, Revision 1

**REFERENCES:**

- (a) Letter from G. H. Gellrich (CCNPP) to Document Control Desk (NRC), dated October 2, 2012, Application for Technical Specification Improvement to Adopt TSTF-501-A, Revision 1, "Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control"
- (b) Letter from N. S. Morgan (NRC) to G. H. Gellrich (CCNPP), dated November 16, 2012, Calvert Cliffs Nuclear Power Plant, Unit No. 1 and 2 - Acceptance Review Results Regarding TSTF-501-A License Amendment Request (TAC No. ME9794 and ME9795)

In Reference (a), Calvert Cliffs Nuclear Power Plant, LLC submitted a request for an amendment to the Technical Specifications for Calvert Cliffs Nuclear Power Plant (Calvert Cliffs) Units 1 and 2 to relocate the current stored diesel fuel oil numerical volume requirements from the Technical Specification to the Technical Specification Bases consistent with Technical Specification Task Force (TSTF)-501-A, Revision 1. Calvert Cliffs also proposed a similar change to Surveillance Requirement 3.8.1.5 in Technical Specification 3.8.1, "AC Sources-Operating" to relocate the specific numerical value for the day tank fuel oil volume from the Technical Specification to the Technical Specification Bases.

Reference (b) provided the results of the Nuclear Regulatory Commission staff acceptance review and requested we provide additional information regarding the requested amendment. The requested information was discussed during a phone call with the Nuclear Regulatory Commission staff on November 13, 2012 and is provided below.

ADD  
NRR

The marked up Technical Specification Bases provided in Reference (a) did not provide a reference to the method of calculating the required stored diesel fuel oil volume equivalent to a seven day supply. The method provided in American National Standards Institute (ANSI) N195-1976, Section 5.4, as endorsed by Regulatory Guide 1.137, Revision 1, Section C.1.c, is used to calculate the required stored diesel fuel oil volume equivalent to a seven day supply. Calvert Cliffs uses the “conservative” calculational method described by ANSI N195-1976, Section 5.4 to calculate the required stored diesel fuel oil volume. These references are added to the marked up Technical Specification Bases as shown in Attachment (1). Please replace the previously provided Technical Specification Bases markup for Surveillance Requirement 3.8.3.1 with the attached pages. Additionally, note that the diesel generator day tank volume meets the requirements of ANSI N195-1976, Section 6.1, to provide at least 60 minutes of operation based on the fuel consumption at 100% of the continuous rating of the diesel generator plus a margin of 10%.

This supplement does not change the No Significant Hazards Consideration previously provided in Reference (a). There are no regulatory commitments contained in this letter.

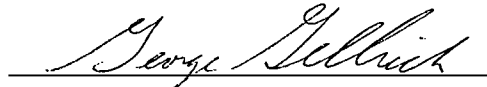
Should you have questions regarding this matter, please contact Mr. Douglas E. Lauver at (410) 495-5219.

Very truly yours,



STATE OF MARYLAND :  
                                  : TO WIT:  
COUNTY OF CALVERT :

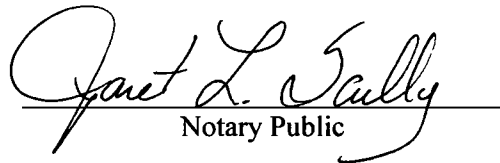
I, George H. Gellrich, being duly sworn, state that I am Site Vice President - Calvert Cliffs Nuclear Power Plant, LLC (CCNPP), and that I am duly authorized to execute and file this License Amendment Request on behalf of CCNPP. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other CCNPP employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.



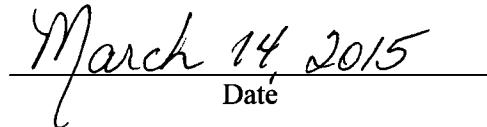
Subscribed and sworn before me, a Notary Public in and for the State of Maryland and County of St. Mary's, this 26<sup>th</sup> day of November, 2012.



WITNESS my Hand and Notarial Seal:

  
Notary Public

My Commission Expires:

  
Date

GHG/PSF/bjd

Attachment: (1) Marked up Technical Specification Bases Pages

cc: N. S. Morgan, NRC  
W. M. Dean, NRC

Resident Inspector, NRC  
S. Gray, DNR

**ATTACHMENT (1)**

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**MARKED UP TECHNICAL SPECIFICATION BASES PAGES**

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BASES

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F.1

With a Required Action and associated Completion Time not met, or one or more DGs with diesel fuel oil not within limits for reasons other than addressed by Conditions A through E, the associated DG may be incapable of performing its intended function and must be immediately declared inoperable. "Associated DG(s)" are identified in the Applicability Bases.

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SURVEILLANCE  
REQUIREMENTS

SR 3.8.3.1

This SR provides verification that there is an adequate inventory of fuel oil in the DG FOSTs to support one unit on accident loads and one unit on shutdown loads for seven days. The seven day period is sufficient time to place the unit in a safe shutdown condition and to bring in replenishment fuel from an offsite location.

Insert 1

The 31 day Frequency is adequate to ensure that a sufficient supply of fuel oil is available, since low level alarms are provided and unit operators would be aware of any large uses of fuel oil during this period.

SR 3.8.3.2

The tests listed below are a means of determining whether new fuel oil is of the appropriate grade (i.e., 2D and 2D low sulfur) and has not been contaminated with substances that would have an immediate, detrimental impact on diesel engine combustion. Note that further references to American Society for Testing Materials (ASTM) 2D fuel oil include both 2D and 2D low sulfur. If results from these tests are within acceptable limits, the fuel oil may be added to the storage tanks without concern for contaminating the entire volume of fuel oil in the storage tanks. These tests are to be conducted prior to adding the new fuel to the storage tank(s), but in no case is the time between receipt of new fuel and conducting the tests to exceed 31 days. The tests, limits, and applicable ASTM Standards are as follows:

- a. Sample the new fuel oil in accordance with Reference 3, ASTM D4057-1995;

BASES

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The Frequency of this test takes into consideration fuel oil degradation trends that indicate that particulate concentration is unlikely to change significantly between Frequency intervals.

SR 3.8.3.3


Microbiological fouling is a major cause of fuel oil degradation. There are numerous bacteria that can grow in fuel oil and cause fouling, but all must have a water environment in order to survive. Removal of water from the fuel storage tanks once every 92 days eliminates the necessary environment for bacterial survival. This is the most effective means of controlling microbiological fouling. In addition, it eliminates the potential for water entrainment in the fuel oil during DG operation. Water may come from any of several sources, including condensation, ground water, rain water, and contaminated fuel oil, and from breakdown of the fuel oil by bacteria. Frequent checking for and removal of accumulated water minimizes fouling and provides data regarding the watertight integrity of the fuel oil system. The SR Frequencies are established by Reference 3. This SR is for preventative maintenance. The presence of water does not necessarily represent failure of this SR provided the accumulated water is removed during performance of the surveillance test.

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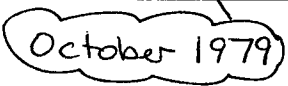
REFERENCES

1. UFSAR
  2. ASTM Standards
  3. Regulatory Guide 1.137, "Fuel-Oil Systems for Standby Diesel Generators," ~~January 1978~~
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Insert 2



October 1979



#### Insert 1

The fuel oil level ensuring a 7 day supply is 49,500 gallons (FOST 1A) and 85,000 gallons (FOST 21) when calculated in accordance with References 3 and 4. The required fuel oil storage volume is determined using the most limiting energy content of the stored fuel. Using the limiting energy content, the required diesel generator output and the corresponding fuel oil consumption rate, the onsite fuel oil storage volume required for 7 days of operation can be determined. Surveillance Requirement 3.8.3.2 requires new fuel to be tested to verify that the energy content is within the range assumed in the diesel fuel oil consumption calculations.

#### Insert 2

4. ANSIN195-1976, "Fuel Oil Systems for Standby Diesel-Generators," April 1976, Section 5.4