Tennessee Valley Authority, 1101 Market Street, LP 5A, Chattanooga, Tennessee 37402-2801

August 29, 2008

10 CFR 52.79

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

In the Matter of) Docket No. 52-014 and 52-015
Tennessee Valley Authority)

BELLEFONTE COMBINED LICENSE APPLICATION – RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION – EMERGENCY DIESEL ENGINE FUEL OIL STORAGE AND TRANSFER SYSTEM

Reference: Letter from Tanya Simms (NRC) to Andrea L. Sterdis (TVA), Request for Additional Information Letter No. 092 Related to SRP Section 09.05.04 for the Bellefonte Units 3 and 4 Combined License Application, dated July 31, 2008

This letter provides the Tennessee Valley Authority's (TVA) response to the Nuclear Regulatory Commission's (NRC) request for additional information (RAI) items included in the reference letter.

A response to each NRC request in the subject letter is addressed in the enclosure which also identifies any associated changes that will be made in a future revision of the BLN application.

If you should have any questions, please contact Tom Spink at 1101 Market Street, LP5A, Chattanooga, Tennessee 37402-2801, by telephone at (423) 751-7062, or via email at tespink@tva.gov.

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

Executed on this 29th day of AUG, 2008.

Jack A. Bailey
Vice President, Nuclear Generation Development

Enclosure
cc: See Page 2

D085
NRO

cc: (Enclosures)
E. Cummins, Westinghouse
S. P. Frantz, Morgan Lewis
M. W. Gettler, FP&L
R. C. Grumbir, NuStart
P. S. Hastings, NuStart
P. Hinnenkamp, Entergy
M. C. Kray, NuStar
D. Lindgren, Westinghouse
G. D. Miller, PG&N
M.C. Nolan, Duke Energy
N. T. Simms, Duke Energy
T. Simms, NRC/HQ
G. A. Zinke, NuStart

cc: (w/o Enclosure)
B. Anderson, NRC/HQ
M.M. Comar, NRC/HQ
B. Hughes ,NRC/HQ
R.G. Joshi, NRC/HQ
R.H. Kitchen, PG
M. C. Kray, NuStart
A. M. Monroe, SCE&G
C. R. Pierce, SNC\
R. Register, DOE/PM
L. Reyes, NRC/RII
J.M. Sebrosky, NRC/HQ

Enclosure
TVA letter dated August 29, 2008
RAI Response

Response to NRC Request for Additional Information letter No. 092 dated July 31, 2008
(4 pages, including this list)

Subject: Emergency Diesel Engine Fuel Oil Storage and Transfer System in the Final Safety Analysis Report

RAI Number	Date of TVA Response
09.05.04-01(a)	This letter – see following pages
09.05.04-01(b)	This letter – see following pages

Associated Additional Attachments / Enclosures	Pages Included
None	

Enclosure
TVA letter dated August 29, 2008
RAI Response

NRC Letter Dated: July 31, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 09.05.04-01(a)

Fuel oil testing is not included in the Operational Programs, Technical Specifications, or Investment Protection Short-Term Availability Controls. Please identify the controls in place to ensure that the fuel oil quality program is implemented according to FSAR Section 9.5.4.5.2.

BLN RAI ID: 0035

BLN RESPONSE:

The fuel oil program is not specifically addressed in the Investment Protection Program described in FSAR Section 16.3, although the Standby Diesels and Ancillary Diesels are described in DCD Table 16.3-1. Inherent in the requirement for Investment Protection equipment is the position that necessary attendant equipment and support systems be available to support the design mission.

DCD Subsection 9.5.4.7.2 requires the applicant to specify diesel fuel specification grade and fuel properties consistent with the manufacturers' recommendations, and to provide measures to protect against fuel degradation by a program of fuel sampling and testing.

The plant is maintained and operated in accordance with the licensing basis (e.g. FSAR). The Operational Quality Assurance Program Description (QAPD), as described in Chapter 17 and Part 11 of the COLA, provide controls for compliance with the FSAR. QAPD Part III, Section 1 describes the Non-Safety Related SSC Quality Controls. These quality controls require and verify that the fuel oil quality program is implemented according to the FSAR.

This response is expected to be STANDARD for the S-COLAs.

ASSOCIATED BLN COL APPLICATION REVISIONS:

No COLA revisions have been identified associated with this response.

ASSOCIATED ATTACHMENTS/ENCLOSURES:

None

Enclosure
TVA letter dated August 29, 2008
RAI Response

NRC Letter Dated: July 31, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 09.05.04-01(b)

Subsection 9.5.4.5.2 of the Bellefonte COL states that diesel fuel oil from the storage tanks is sampled and tested, but no quality requirements are listed. The application lists quality requirements that appear to apply only to new fuel oil. Please provide the quality requirements for the periodic testing of stored fuel oil.

BLN RAI ID: 0035

BLN RESPONSE:

DCD Subsection 9.5.4.7.2 requires the applicant to specify diesel fuel specification grade and fuel properties consistent with the manufacturers' recommendations, and to provide measurers to protect against fuel degradation by a program of fuel sampling and testing.

The diesel fuel oil testing program requires testing both new fuel oil and stored fuel oil. High fuel oil quality is provided by specifying the use of ASTM Grade 2D fuel oil with a sulfur content as specified by the engine manufacturer.

A fuel sample is analyzed prior to addition of ASTM Grade 2D fuel oil to the storage tanks. The sample moisture content and particulate or color is verified per ASTM 4176. In addition, kinetic viscosity is tested to be within the limits specified in Table 1 of ASTM D975. The remaining critical parameters per Table 1 of ASTM D975 are verified compliant within 7 days.

Fuel oil quality is verified by sample every 92 days to meet ASTM 2D fuel oil criteria. The addition of fuel stabilizers and other conditioners is based on sample results.

The fuel oil storage tanks are inspected on a monthly basis for the presence of water. Any accumulated water is to be removed.

The FSAR will be revised to address the Fuel Oil Program for new and stored fuel oil in a future revision of the COLA as indicated below.

This response is expected to be STANDARD for the S-COLAs.

ASSOCIATED BLN COL APPLICATION REVISIONS:

COLA Part 2, FSAR. Chapter 9, Section 9.5.4.5.2 will be revised from:

High fuel oil quality is provided by specification of the required grade and properties of the fuel oil for procurement, by testing of samples of new fuel oil prior to addition into the tanks, and by monitoring the fuel oil for contamination and degradation with periodic testing of samples from the storage tanks in accordance with manufacturer's recommendations.

The fuel oil storage tanks are inspected at least once per 92 days to check for and remove accumulated water.

The fuel oil quality is verified by sampling and testing from the storage tanks at least once per 92 days. New fuel oil is tested prior to its addition to the storage tanks to verify that the sample meets the following minimum requirements:

- Water and sediment content of less than or equal to 0.05 volume percent.

- Kinematic viscosity at 40° C of greater than or equal to 1.9 mm2/s (1.9 centistokes), but less than or equal to 4.1 mm2/s (4.1 centistokes).
- Specific gravity as specified by the manufacturer at 16/16° C (60/60° F), or an API gravity at 16° C (60° F), within limits established in accordance with manufacturer's recommendations.
- Tested impurity level of less than 2 mg of insolubles per 100 ml. The analysis is completed within 7 days after obtaining the sample, but may be performed after the addition of new oil.

To read:

The diesel fuel oil testing program requires testing both new fuel oil and stored fuel oil. High fuel oil quality is provided by specifying the use of ASTM Grade 2D fuel oil with a sulfur content as specified by the engine manufacturer.

A fuel sample is analyzed prior to addition of ASTM Grade 2D fuel oil to the storage tanks. The sample moisture content and particulate or color is verified per ASTM 4176. In addition, kinetic viscosity is tested to be within the limits specified in Table 1 of ASTM D975. The remaining critical parameters per Table 1 of ASTM D975 are verified compliant within 7 days.

Fuel oil quality is verified by sample every 92 days to meet ASTM Grade 2D fuel oil criteria. The addition of fuel stabilizers and other conditioners is based on sample results.

The fuel oil storage tanks are inspected on a monthly basis for the presence of water. Any accumulated water is to be removed.

ASSOCIATED ATTACHMENTS/ENCLOSURES:

None