

September 27, 2011

TSTF-11-16
PROJ0753

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

SUBJECT: Proposed Revision to the Notice of Availability for TSTF-501, Revision 1, "Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control"

REFERENCE: Notice of Availability of the Models for Plant-Specific Adoption of Technical Specifications Task Force Traveler TSTF-501, Revision 1, "Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control," 75FR29588, May 26, 2010

In the referenced Federal Register Notice, the Nuclear Regulatory Commission (NRC) published the Notice of Availability for TSTF-501, Revision 1, "Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control." The Traveler exchanges the specific volume of diesel fuel oil and lubricating oil in the Technical Specifications with the Technical Specifications Bases statement of the underlying basis for the volume (typically a 7 day supply). The specific volumes that represent the underlying basis are moved to the Bases and placed under licensee control. The Traveler eliminates the administrative burden of requesting a change to the Technical Specifications when the safety basis for the volume is not changed.

The Technical Specifications of approximately two-thirds of licensees specify a volume of diesel fuel oil and lubricating oil to be stored for each diesel generator. However, the Technical Specifications of approximately one-third of licensees specify a volume of diesel fuel oil and lubricating oil for a single diesel generator. The TSTF intended TSTF-501 to be applicable to all plant types, regardless of the plant licensing basis.

The NRC model application was not written to apply to licensees whose Technical Specifications specify a volume of diesel fuel oil and lubricating oil for a single diesel generator. The model application requires licensees to state, "TSTF Traveler-501, Revision 1, assumes that the current licensing basis requires that a [7]-day supply of stored diesel fuel oil and lube oil be available for 'each' diesel generator. This is the current licensing basis for [PLANT]." Statements that the fuel oil and lubricating oil volume limits applying to "each diesel generator" appear over twenty times in the model application and model safety evaluation. These statement effectively prevent plants with a different licensing basis from adopting TSTF-501.

The TSTF pointed out the inconsistency between the Notice of Availability and TSTF-501 immediately after publication of the Notice. The NRC agreed to work with the TSTF to resolve the issue.

On July 26, 2011, the NRC issued License Amendment 242 to the Technical Specifications for Palisades Nuclear Plant. The amendment approved changes similar to those in TSTF-501, even though the Palisades Technical Specifications require a 7 day supply of diesel fuel oil and lubricating oil for a single diesel generator. The NRC Safety Evaluation concluded the requested change was acceptable without reliance on any plant-specific feature.

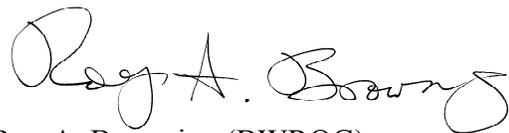
Based on the NRC approval of the Palisades amendment and to correct the applicability of the previously issued model application and model safety evaluation, the TSTF requests that the NRC revise and republished the Notice of Availability to be consistent with TSTF-501 and to be applicable to plants with a licensing basis similar to the Palisades plant.

Enclosed are the recommended changes to the published model application and model safety evaluation.

Should you have any questions, please do not hesitate to contact us.



Norman J. Stringfellow (PWROG/W)



Roy A. Browning (BWROG)



William J. Steelman (PWROG/CE)



Wendy E. Croft (PWROG/B&W)

Enclosure

cc: Robert Elliott, Technical Specifications Branch, NRC
Michelle Honcharik, Licensing Processes Branch, NRC

**MODEL APPLICATION FOR PLANT-SPECIFIC ADOPTION OF TSTF TRAVELER-501,
REVISION 1, “RELOCATE STORED FUEL OIL AND LUBE OIL VOLUME VALUES TO
LICENSEE CONTROL”**

{NOTES:

1. The bracketed 7-day and 6-day values used throughout the model application and safety evaluation should be replaced with the licensee’s current licensing basis (CLB) fuel/lube oil storage requirements. For licensees with one value - rather than a range of values - specified in Conditions A and B (or equivalent), the single value should be replaced with the licensee’s CLB fuel/lube oil storage requirements.
2. Licensees and NRC reviewers should not assume that the lower limit value in the range of values provided in Conditions A and/or B corresponds to one day less than the upper limit value, especially for licensees that have received prior NRC approval of a CLB fuel/lube oil volume corresponding to less than 7 days of EDG operation. The basis for the lower limit range value should be verified.
3. “[Each/A]” denotes that “each” or “a” should be used as needed to reflect whether the licensee’s current licensing basis fuel/lube oil requirements apply to “each” diesel generator or “a” diesel generator.
34. Applications will need to be processed under normal amendment review controls, including technical branch review, if:
 - The licensee proposed changes to any of the following: the stored diesel fuel oil and lube oil current plant configuration; current numerical volume and/or time requirements; and fuel/lube oil limits associated with EDG operability.
 - The licensee proposed changes to Surveillance Requirement (SR) Frequencies, Required Actions, or Completion Times associated with stored diesel fuel oil and lube oil.
 - The licensee proposed changes to the current ASTM D975 reference.
 - The licensee proposed to adopt a range of fuel/lube oil limits in the Condition statements when a range of fuel/lube oil limits does not currently exist in the licensee’s Technical Specifications (TS).
 - The licensee proposed changes that are different from the approved CLIP and are more than administrative in nature.}

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

SUBJECT: [PLANT]
DOCKET NO. 50-[XXX]
LICENSE AMENDMENT REQUEST FOR ADOPTION OF TECHNICAL
SPECIFICATIONS TASK FORCE (TSTF) TRAVELER TSTF-501, REVISION 1,
“RELOCATE STORED FUEL OIL AND LUBE OIL VOLUME VALUES TO
LICENSEE CONTROL”

In accordance with the provisions of Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), [LICENSEE] is submitting a request for an amendment to the Technical Specifications (TS) for [PLANT].

The proposed changes revise TS 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," by relocating the current stored diesel fuel oil and lube oil numerical volume requirements from the TS to the TS Bases so that it may be modified under licensee control. The TS is modified so that the stored diesel fuel oil and lube oil inventory will require that a [7]-day supply be available for each/a diesel generator. Condition A and Condition B in the Action table are revised and Surveillance Requirements (SR) 3.8.3.1 and 3.8.3.2 are revised to reflect the above change. [In addition, the reference to Appendix B of ANSI N195-1976, "Fuel Oil Systems for Standby Diesel-Generators," in the TS Bases is deleted. As a result, the only reference will be to ANSI N195-1976. The deletion of Appendix B of ANSI N195-1976 in the TS Bases is not required. ANSI N195-1976 and Regulatory Guide 1.137, Revision 1, "Fuel-Oil Systems for Standby Diesel Generators," are the current Bases references.

Regarding stored diesel fuel oil and lube oil, no changes to the current plant configuration, current numerical volume requirements, or current [7]-day basis are proposed in this application; the proposal merely swaps the current numerical volume requirements from the TS to the TS Bases and swaps the associated current [7]-day basis from the TS Bases to the TS. In addition, no changes to any SR Frequency, Required Actions, or Completion Times are proposed in this application.

These proposed changes are consistent with NRC-approved Revision 1 to TSTF Improved Standard Technical Specifications (STS) Change Traveler TSTF-501, "Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control." The availability of this TS improvement was announced in the *Federal Register* on [DATE] ([] FR []) as part of the consolidated line item improvement process (CLIP).

~~The current licensing basis for [PLANT] requires TSTF Traveler 501, Revision 1, assumes that the current licensing basis requires that a [7]-day supply of stored diesel fuel oil and lube oil be available for "each/a" diesel generator. - This is the current licensing basis for [PLANT].~~

[Discuss any other differences not already considered with TSTF Traveler-501, Revision 1.]

- Attachment 1 provides an evaluation of the proposed changes.
- Attachment 2 provides markup pages of existing TS and TS Bases to show the proposed change.
- Attachment 3 provides revised (clean) TS pages.

[LICENSEE] requests approval of the proposed license amendment by [DATE], with the amendment being implemented [BY DATE OR WITHIN X DAYS].

In accordance with 10 CFR 50.91(a)(1), "Notice for Public Comment," the analysis about the issue of no significant hazards consideration using the standards in 10 CFR 50.92 is being provided to the Commission.

In accordance with 10 CFR 50.91(b)(1), "Notice for Public Comment; State Consultation," a copy of this application and its reasoned analysis about no significant hazards considerations is being provided to the designated [STATE] Official.

I declare [or certify, verify, state] under penalty of perjury that the foregoing is correct and true.

Executed on [date] [Signature]

If you should have any questions about this submittal, please contact [NAME, TELEPHONE NUMBER].

Sincerely,

[Name, Title]

Attachments: [As stated or provide list]

cc: [NRR Project Manager]
[Regional Office]
[Resident Inspector]
[State Contact]

Attachment 1 Evaluation of Proposed Change

License Amendment Request for Adoption of TSTF-501, “Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control”

1.0 DESCRIPTION

The proposed changes revise Technical Specification (TS) 3.8.3, “Diesel Fuel Oil, Lube Oil, and Starting Air,” by relocating the current stored diesel fuel oil and lube oil numerical volume requirements from the TS to the TS Bases so that it may be modified under licensee control. The TS are modified so that the stored diesel fuel oil and lube oil inventory will require that a [7]-day supply be available for [each/a] diesel generator. This change is consistent with NRC-approved Technical Specification Task Force (TSTF) Improved Standard Technical Specifications (STS) Change Traveler TSTF-501, Revision 1, “Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control,” [Minor differences between the proposed plant-specific TS changes, and the changes proposed by TSTF-501 are listed in Section 2.0.] The availability of this TS improvement was announced in the *Federal Register* on [DATE] ([] FR []) as part of the consolidated line item improvement process (CLIP).

2.0 PROPOSED CHANGE

The proposed changes revise TS 3.8.3, “Diesel Fuel Oil, Lube Oil, and Starting Air,” by relocating the current stored diesel fuel oil and lube oil numerical volume requirements from the TS to the TS Bases so that it may be modified under licensee control. The TS are modified so that the stored diesel fuel oil and lube oil inventory will require that a [7]-day supply be available for [each/a] diesel generator. As a result:

- Condition A and Condition B in the Action table are revised. Currently, Condition A and Condition B are entered when the stored diesel fuel oil and lube oil numerical volume requirements are not met. As discussed in the current TS Bases, the numerical volume requirements in Condition A and Condition B are based on volumes less than a [7]-day supply, but greater than an a [6]-day supply. The revision relocates the volumetric requirements from the TS and places it in the TS Bases. The TS are modified so that Condition A and Condition B are entered when the stored diesel fuel oil and lube oil inventory is less than a [7]-day supply, but greater than a [6]-day supply for [each/a]one or more diesel generators.
- Surveillance Requirements (SR) 3.8.3.1 and 3.8.3.2 are revised. Currently, SR 3.8.3.1 and SR 3.8.3.2 verify that the stored diesel fuel oil and lube oil numerical volume requirements are met. As discussed in the current TS Bases, the numerical volume requirements in SR 3.8.3.1 and SR 3.8.3.2 are based on maintaining at least a [7]-day supply. The revision relocates the volumetric requirements from the TS and places it in the TS Bases. The TS are modified so that SR 3.8.3.1 and SR 3.8.3.2 verify that the stored diesel fuel oil and lube oil inventory is greater than or equal to a [7]-day supply for [each/a] diesel generator.
- [The reference to Appendix B of ANSI N195-1976 in the TS Bases is deleted. As a result, the only reference will be to ANSI N195-1976.]

Proposed revisions to the TS Bases are also included in this application. Adoption of the TS Bases associated with TSTF Traveler-501, Revision 1, is an integral part of implementing this TS amendment. The changes to the affected TS Bases pages will be incorporated in accordance with the TS Bases Control Program.

The SR 3.8.3.1 Bases in TSTF Traveler-501, Revision 1, references ANSI-N195. At [Plant Name, Unit No.], the current reference is ANSI-N195. This application does not propose to modify the current ANSI-N195 reference.

[LICENSEE] is [not] proposing variations or deviations from the TS changes described in TSTF-501, Revision 1, or the NRC staff's model safety evaluation (SE) published in the *Federal Register* on [DATE] ([] FR []) as part of the CLIP Notice of Availability. [Discuss any differences with TSTF-501, Revision 1 and the effect of any changes on the NRC staff model SE.]

3.0 BACKGROUND

The background for this application is addressed by the model safety evaluation referenced in the NRC's Notice of Availability published on [DATE] ([] FR []) and TSTF-501, Revision 1.

4.0 TECHNICAL ANALYSIS

[LICENSEE] has reviewed the model SE published in the *Federal Register* on [DATE] ([] FR []) as part of the CLIP Notice of Availability. [LICENSEE] has concluded that the technical justifications presented in the SE prepared by the NRC staff are applicable to [PLANT] and therefore justify this amendment for the incorporation of the proposed changes to the [PLANT] TS.

5.0 REGULATORY SAFETY ANALYSIS

5.1 NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

[LICENSEE] has evaluated the proposed changes to the TS using the criteria in 10 CFR 50.92 and has determined that the proposed changes do not involve a significant hazards consideration.

Description of Amendment Request: The proposed changes revise TS by relocating the current stored diesel fuel oil and lube oil numerical volume requirements from the TS to the TS Bases so that it may be modified under licensee control. The current numerical volume requirements are based on a [7]-day supply. The TS is modified so that the stored diesel fuel oil and lube oil inventory will require that a [7]-day supply be available for [each/a] diesel generator. |

Basis for proposed no significant hazards determination: As required by 10 CFR 50.91(a), the [LICENSEE] analysis of the issue of no significant hazards consideration is presented below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change relocates the volume of diesel fuel oil and lube oil required to support [7]-day operation of ~~each/a~~the onsite diesel generator[s], and the volume equivalent to a [6]-day supply, to licensee control. The specific volume of fuel oil equivalent to a [7]- and [6]-day supply is calculated using the NRC-approved methodology described in Regulatory Guide 1.137, Revision 1, "Fuel-Oil Systems for Standby Diesel Generators" and ANSI-N195 1976, "Fuel Oil Systems for Standby Diesel-Generators." The specific volume of lube oil equivalent to a [7]- and [6]-day supply is based on the diesel generator manufacturer's consumption values for the run time of the diesel generator. Because the requirement to maintain a [7]-day supply of diesel fuel oil and lube oil is not changed and is consistent with the assumptions in the accident analyses, and the actions taken when the volume of fuel oil and lube oil are less than a [6]-day supply have not changed, neither the probability nor the consequences of any accident previously evaluated will be affected. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. The change does not alter assumptions made in the safety analysis but ensures that the diesel generator operates as assumed in the accident analysis. The proposed change is consistent with the safety analysis assumptions. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed change relocates the volume of diesel fuel oil and lube oil required to support [7]-day operation of ~~each/a~~the onsite diesel generator[s], and the volume equivalent to a [6]-day supply, to licensee control. As the bases for the existing limits on diesel fuel oil and lube oil are not changed, no change is made to the accident analysis assumptions and no margin of safety is reduced as part of this change. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

5.2 APPLICABLE REGULATORY REQUIREMENTS/CRITERIA

A description of the proposed TS change and its relationship to applicable regulatory requirements were published in the *Federal Register* Notice of Availability on [DATE] ([] FR []).

[LICENSEE] has reviewed the NRC staff's model SE referenced in the CLIP Notice of Availability and concluded that the regulatory evaluation section is applicable to [PLANT].

6.0 ENVIRONMENTAL CONSIDERATION

The proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR Part 20, and would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

7.0 REFERENCES

{NOTE: Provide list of references.}

MODEL SAFETY EVALUATION FOR PLANT-SPECIFIC ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER-501, REVISION 1, “RELOCATE STORED FUEL OIL AND LUBE OIL VOLUME VALUES TO LICENSEE CONTROL”

1.0 INTRODUCTION

By application dated [DATE], [LICENSEE] (the licensee) requested changes to the TS for the [PLANT] to adopt Technical Specifications Task Force (TSTF) Improved Standard Technical Specifications (STS) Change Traveler TSTF-501, Revision 1, “Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control.” The licensee’s current Technical Specifications (TS) contain numerical volume requirements for both stored diesel fuel oil and lube oil. Any changes to the numerical volume requirements currently require prior approval from the U.S. Nuclear Regulatory Commission (NRC). As an example, diesel fuel oil numerical volume requirements may need to be modified in order to take into account changes to the energy content (BTU/gallon) of available fuels in the market. Fluctuations in energy content could be caused by a variety of factors, including changes to regulatory requirements. By adopting TSTF-501, Revision 1, the numerical volume requirements for both stored diesel fuel oil and lube oil are relocated from the TS to a licensee-controlled document. As a result, the numerical volume requirements for both stored diesel fuel oil and lube oil may be modified under licensee control and therefore may not require prior NRC approval.

The proposed changes revise TS 3.8.3, “Diesel Fuel Oil, Lube Oil, and Starting Air,” by relocating the current stored diesel fuel oil and lube oil numerical volume requirements from the TS to the TS Bases so that it may be modified under licensee control. The TS are modified so that the stored diesel fuel oil and lube oil inventory will require that a [7]-day supply be available for each/a diesel generator. As a result:

- Condition A and Condition B in the Action table are revised. Currently, Condition A and Condition B are entered when the stored diesel fuel oil and lube oil numerical volume requirements are not met. As discussed in the current TS Bases, the numerical volume requirements in Condition A and Condition B are based on volumes less than a [7]-day supply, but greater than an a [6]-day supply. The revision relocates the volumetric requirements from the TS and places it in the TS Bases. The TS are modified so that Condition A and Condition B are entered when the stored diesel fuel oil and lube oil inventory is less than a [7]-day supply, but greater than a [6]-day supply for ~~each/a~~one or more diesel generators.
- Surveillance Requirements (SR) 3.8.3.1 and 3.8.3.2 are revised. Currently, SR 3.8.3.1 and SR 3.8.3.2 verify that the stored diesel fuel oil and lube oil numerical volume requirements are met. As discussed in the current TS Bases, the numerical volume requirements in SR 3.8.3.1 and SR 3.8.3.2 are based on maintaining at least a [7]-day supply. The revision relocates the volumetric requirements from the TS and places it in the TS Bases. The TS are modified so that SR 3.8.3.1 and SR 3.8.3.2 verify that the stored diesel fuel oil and lube oil inventories are greater than or equal to a [7]-day supply for each/a diesel generator.

- [The reference to Appendix B of American National Standards Institute (ANSI) N195-1976 in the TS Bases is deleted. As a result, the only reference will be to ANSI N195-1976.]

{REVIEWER'S NOTE: This modification to the TS may not be needed if it already exists. The BWR Standard TS already contain this change. Although not a change associated with TSTF Traveler-501, Revision 1, verify that Regulatory Guide (RG) 1.137 is referenced in the reference section of the TS Bases. This is needed because RG 1.137, Revision 1, provides supplemental information to ANSI N195-1976. In addition, RG 1.137 will now be referenced in SR 3.8.3.1, if not referenced elsewhere.}

The licensee stated that the license amendment request (LAR) is consistent with NRC-approved TSTF-501, Revision 1. [Discuss any differences with TSTF-514, Revision 1.] The availability of this TS improvement was announced in the *Federal Register* on [DATE] ([] FR []) as part of the consolidated line item improvement process (CLIP).

{REVIEWER'S NOTE: Discuss any differences with TSTF-501, Revision 1. Consideration should be given to obtaining technical branch concurrences when the differences are more than administrative in nature.}

2.0 REGULATORY EVALUATION

2.1 Modification to LCO 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," Requirements

The regulation at Title 10 of the *Code of Federal Regulations* (10 CFR) 50.36(c)(2)(i) states TS will include Limiting Conditions for Operation (LCO) which are "the lowest functional capability or performance levels of equipment required for safe operation of the facility."

The standby alternating current (AC) power sources are a part of the primary success path and function or actuate to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Diesel fuel oil and lube oil are retained in the TS to satisfy 10 CFR 50.36(c)(2)(i) since they support the operation of the standby AC power sources. The proposed changes revise TS 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," by relocating the current stored diesel fuel oil and lube oil numerical volume requirements from the TS to the TS Bases so that it may be modified under licensee control. The TS are modified so that the stored diesel fuel oil and lube oil inventory will require that a [7]-day supply be available for [each/a] diesel generator. As discussed in Section 3.0 of this SE, this change still provides assurance that the lowest functional capability or performance levels of equipment required for safe operation of the facility will be continued to be met. Because 10 CFR 50.36(c)(2)(i) continues to be met, this change is acceptable.

2.2 Modification to Action Table for TS 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air"

Paragraph 50.36(c)(2)(i) goes on to state that "when a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met."

Condition A and Condition B in the Action table for TS 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," are revised to reflect the change in LCO requirements as discussed in Section 2.1 above. Currently, Condition A and Condition B are entered when the stored diesel

fuel oil and lube oil numerical volume requirements are not met. As discussed in the current TS Bases, the numerical volume requirements in Condition A and Condition B are based on volumes less than a [7]-day supply, but greater than an a [6]-day supply. The proposal relocates the volumetric requirements from the TS and places it in the TS Bases. The TS is modified so that Condition A and Condition B are entered when the stored diesel fuel oil and lube oil inventory is less than a [7]-day supply, but greater than a [6]-day supply for ~~each/alone~~ ~~or more~~ diesel generators. These remedial actions are permitted by 10 CFR 50.36(c)(2)(i), and the technical justification for allowing these remedial actions is discussed in Section 3.0 of this SE.

2.3 Modification to SR 3.8.3.1 and 3.8.3.2

Paragraph 50.36(c)(3) states TS will include SRs which are “requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.”

Currently, SR 3.8.3.1 and SR 3.8.3.2 verify that the stored diesel fuel oil and lube oil numerical volume requirements are met. SR 3.8.3.1 and SR 3.8.3.2 are revised to reflect the change in LCO requirements as discussed in Section 2.1 above. As a result, the SR are modified so that SR 3.8.3.1 and SR 3.8.3.2 verify that the stored diesel fuel oil and lube oil inventory is greater than or equal to a [7]-day supply for ~~each/a~~ diesel generator. As discussed in Section 3.0 of this SE, this change still provides assurance that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met. Because 10 CFR 50.36(c)(3) continues to be met, this change is acceptable.

2.4 Deletion of Reference to Appendix B of ANSI N195-1976

As discussed in Section 2.1 above, LCO 3.8.3, “Diesel Fuel Oil, Lube Oil, and Starting Air,” is retained in the TS in order to satisfy 10 CFR 50.36(c)(2)(i). The proposed change deletes the reference to Appendix B of ANSI N195-1976 in the TS Bases for TS 3.8.3. As a result, there will only be a reference to ANSI N195-1976, “Fuel Oil Systems for Standby Diesel-Generators.” Although not a part of TS, the TS Bases contain amplifying and clarifying information on TS, and modification of the TS Bases can potentially impact TS requirements. This modification was evaluated in order to consider the potential change to LCO requirements associated with TS 3.8.3. As discussed in Section 3.0 of this SE, this change still provides assurance that the lowest functional capability or performance levels of equipment required for safe operation of the facility will be continued to be met. Because 10 CFR 50.36(c)(2)(i) continues to be met, this modification to LCO 3.8.3 is acceptable.]

3.0 TECHNICAL EVALUATION

3.1 Modification to LCO 3.8.3, “Diesel Fuel Oil, Lube Oil, and Starting Air,” Requirements

[Each/A] diesel generator is provided with a fuel oil capacity sufficient to operate that diesel for a period of [7] days while the diesel generator is supplying maximum load demand. This onsite fuel oil capacity is sufficient to operate the diesel generators for longer than the time to replenish the onsite supply from outside sources.

The diesel generator lubrication system is designed to provide sufficient lubrication to permit proper operation of its associated diesel generator under all loading conditions. The system is required to circulate the lube oil to the diesel engine working surfaces and to remove excess heat generated by friction during operation. [Each/A] diesel generator has a lube oil inventory capable of supporting a minimum of [7] days of operation. This supply is sufficient to allow the operator to replenish lube oil from outside sources.

In order to meet a [7]-day supply of stored diesel fuel oil and lube oil for [each/a] diesel generator, TS 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," currently contains numerical volume requirements associated with a [7]-day supply for [each/a] diesel generator. The TS Bases currently discuss that the numerical volume requirements are based on meeting a [7]-day supply. The proposed change revises TS 3.8.3 by relocating the current stored diesel fuel oil and lube oil numerical volume requirements from the TS to the TS Bases so that it may be modified under licensee control. The TS are modified so that the stored diesel fuel oil and lube oil inventory will require that a [7]-day supply be available for [each/a] diesel generator. No changes to the current plant configuration, current numerical volume requirements, or current [7]-day basis are proposed in the application; the licensee is merely relocating the current numerical volume requirements from the TS to the TS Bases and relocating the associated current [7]-day basis from the TS Bases to the TS.

Section 3.3 below discusses the methodology on how the stored diesel fuel oil and lube oil numerical volume basis in the TS Bases may be modified under licensee control. The use of this methodology will ensure that a [7]-day supply of stored diesel fuel oil and lube oil for [each/a] diesel generator will be met, thereby providing assurance that the lowest functional capability or performance levels of the diesel generator required for safe operation of the facility will be continued to be met. Therefore, this change is acceptable.

3.2 Modification to Action Table for TS 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air"

Currently, Condition A and Condition B are entered when the stored diesel fuel oil and lube oil numerical volume requirements are not met. As discussed in the current TS Bases, the numerical volume requirements in Condition A and Condition B are based on volumes less than a [7]-day supply, but greater than an a [6]-day supply. The proposal relocates the volumetric requirements from the TS and places it in the TS Bases. The TS are modified so that Condition A and Condition B are entered when the stored diesel fuel oil and lube oil inventory is less than a [7]-day supply, but greater than a [6]-day supply for [each/a] ~~one or more~~ diesel generators.

No other parts of Condition A and Condition B (i.e., Required Actions or Completion Times) are proposed to be modified in the application; the licensee is merely relocating the current numerical volume requirements that dictate Condition entry from the TS to the TS Bases and relocating the associated current less than [7]-day but greater than [6]-day basis for Condition entry from the TS Bases to the TS.

Section 3.3 below discusses the methodology on how the stored diesel fuel oil and lube oil numerical volume basis in the TS Bases may be modified under licensee control. The use of this methodology will ensure that the [7]-day and [6]-day supplies of stored diesel fuel oil and

lube oil for [each/a] diesel generator that dictate Condition entry will continue to be calculated in accordance with NRC-approved methods. Therefore, this change is acceptable.

3.3 Modification to SRs 3.8.3.1 and 3.8.3.2

Currently, SR 3.8.3.1 and SR 3.8.3.2 verify that the stored diesel fuel oil and lube oil numerical volume requirements are met. SR 3.8.3.1 and SR 3.8.3.2 are revised to reflect the change in LCO requirements, namely that a [7]-day supply be available for [each/a] diesel generator. As a result, the SRs are modified so that SR 3.8.3.1 and SR 3.8.3.2 verify that the stored diesel fuel oil and lube oil inventory is greater than or equal to a [7]-day supply for [each/a] diesel generator.

No other parts of the SRs (i.e., Frequencies) are proposed to be modified in the application; the licensee is merely relocating the current numerical volume requirement verification from the TS to the TS Bases and relocating the associated current [7]-day basis for verification from the TS Bases to the TS.

The methodology for determining the [7]-day stored diesel fuel oil supply for [each/a] diesel generator, as well as the [6]-day supply associated with Condition A, is calculated in accordance with RG 1.137, Revision 1, "Fuel-Oil Systems for Standby Diesel Generators," and ANSI N195-1976. ANSI N195-1976 discusses how the stored diesel fuel oil requirement shall be calculated based upon the diesel generators operating at the minimum required capacity for the plant condition which is most limiting for the calculation of such capacity. One method for calculating the stored diesel fuel oil supply takes into account the time dependence of diesel generator loads. That is, if diesel generator loads increase or decrease during the event, the load changes shall be included in the required fuel storage calculation. If the design includes provisions for an operator to supply power to equipment other than the minimum required for the plant condition, such additional loads shall be included in the calculation of required fuel storage capacity. RG 1.137, Revision 1, supplements the above by stating that for the time-dependent load method, the minimum required capacity should include the capacity to power the engineered safety features. A minimum margin of 10% shall be added to the calculated storage requirement if the alternate conservative calculation discussed next is not used. Another method for calculating the stored diesel fuel oil supply, which is more conservative than the time-dependent load method, is to calculate the storage capacity by assuming that the diesel operates continuously for seven days at its rated capacity. Both calculation methods shall include an explicit allowance for fuel consumption required by periodic testing. This includes the fuel required for operation of the engine at the minimum loads specified by the engine manufacturer.

One variable used in both stored diesel fuel oil calculation methods is the fuel consumption rate. The property of diesel fuel oil having the most significant effect on the fuel consumption rate is the energy content (heating value) of the fuel. There are standards which correlate the energy content to the fuel's American Petroleum Institute (API) gravity or absolute specific gravity. At a minimum, plants calculate their required fuel storage values assuming the most limiting API gravity or absolute specific gravity, and therefore, the most limiting fuel energy content. As long as the fuel oil placed in the storage tank is within the API gravity range or absolute specific gravity range specified by the licensee, the calculations of fuel consumption and required stored volume remain valid. Current SR 3.8.3.3 requires new fuel to be tested in

order to verify that the new fuel API gravity or absolute specific gravity is within the range assumed in the diesel fuel oil consumption calculations.

The lube oil inventory equivalent to a [7]-day supply, as well as the [6]-day supply associated with Condition B, is based on the diesel generator manufacturer consumption values for the run time of the diesel generator.

The above methods still provide assurance that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met. Therefore, the change to SR 3.8.3.1 and SR 3.8.3.2 is acceptable.

[3.4 Deletion of Reference to Appendix B of ANSI N195-1976

The proposed change deletes the reference to Appendix B of ANSI N195-1976 in the TS Bases for TS 3.8.3. As a result, there will only be a reference to ANSI N195-1976. This modification was evaluated in order to consider the potential change to LCO requirements associated with TS 3.8.3. LCO 3.8.3 requires, in part, that the stored diesel fuel oil and lube oil shall be within limits for [each/a] required diesel generator. The basis for these limits is derived from RG 1.137, Revision 1, and Appendix B of ANSI N195-1976.

For proper operation of the standby diesel generators, it is necessary to ensure the proper quality of the fuel oil. RG 1.137, Revision 1, addresses the recommended fuel oil practices as supplemented by ANSI N195-1976, Appendix B. The fuel oil properties that are checked to ensure the proper quality of the fuel oil are sediment content, the kinematic viscosity, specific gravity (or API gravity), and impurity level.

Although the reference to Appendix B of ANSI N195-1976 will be deleted, RG 1.137, Revision 1, which is currently referenced in the TS Bases, states, "Appendix B to ANSI N195-1976 addresses the recommended fuel oil practices. Although not a mandatory part of the standard, the staff believes Appendix B can serve as an acceptable basis for a program to maintain the quality of fuel oil, as supplemented by regulatory position 2 of this guide." Regulatory Position 2 of RG 1.137 states, in part, "Appendix B to ANSI N195-1976 should be used as a basis for a program to ensure the initial and continuing quality of fuel oil." As a result, the use of Appendix B of ANSI N195-1976 is still referenced, although now indirectly, and therefore still provides a basis for ensuring the proper quality of the fuel oil; namely that water and sediment content, the kinematic viscosity, specific gravity (or API gravity), and impurity level are within the specified limits. Current SR 3.8.3.3 verifies these limits.]

The change still provides assurance that the lowest functional capability or performance levels of equipment required for safe operation of the facility will be continued to be met. Therefore, this modification to LCO 3.8.3 is acceptable.

4.0 CONCLUSIONS

{REVIEWER'S NOTE: Provide conclusion.}

5.0 STATE CONSULTATION

{REVIEWER'S NOTE: Provide State consultation paragraph.}

6.0 ENVIRONMENTAL CONSIDERATION

{REVIEWER'S NOTE: Provide environmental consideration.}

7.0 REFERENCES

{REVIEWER'S NOTE: Provide list of references.}

{REVIEWER'S NOTE: TSTF Traveler-501, Revision 1, was reviewed by and deemed acceptable for use by licensee's for plant-specific adoption by Kristy Bucholtz and Aron Lewin (ITSB), Gurcharan Matharu (EEEB), Mathew Yoder (CSGB), and Robert Wolfgang (CPTB).}