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DEC 04 2018

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

10 CFR 50.90

**SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENT TO LICENSES NPF-14
AND NPF-22: APPLICATION TO ADOPT
TECHNICAL SPECIFICATIONS TASK FORCE
(TSTF) TRAVELER TSTF-501, REVISION 1,
“RELOCATE STORED FUEL OIL AND LUBE OIL
VOLUME VALUES TO LICENSEE CONTROL”
PLA-7729**

**Docket Nos. 50-387
and 50-388**

In accordance with the provisions of Section 50.90 of Title 10 of the Code of Federal Regulations (10 CFR), Susquehanna Nuclear, LLC (Susquehanna) is submitting a request for an amendment to the Technical Specifications for the Susquehanna Steam Electric Station (SSES), Units 1 and 2, Facility Operating Licenses NPF-14 and NPF-22, respectively.

The proposed changes revise Technical Specification (TS) 3.8.3, “Diesel Fuel Oil, Lube Oil, and Starting Air,” by removing the current stored diesel fuel oil numerical volume requirements from the TS and replacing them with diesel operating time requirements. The numerical values will be placed in the TS Bases so that they may be modified under licensee control. The TS is modified so that the stored diesel fuel oil inventory will require that a 7-day supply be available for each diesel generator. Condition A in the Action table is revised and Surveillance Requirement (SR) 3.8.3.1 is revised to reflect the above change.

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 May 26, 2010 (75 FR 29588), as part of the consolidated line item improvement process.

The current licensing basis for SSES requires that a 7-day supply of stored diesel fuel oil and lube oil be available for each diesel generator.

Enclosure 1 provides a description and assessment of the proposed changes along with Susquehanna's determination that the proposed changes do not involve a significant hazard consideration. Enclosure 2 provides the existing TS pages marked to show the proposed changes. Enclosure 3 provides revised (clean) TS pages. Enclosure 4 provides existing TS Bases pages marked to show the proposed changes for information only. Enclosure 5 provides the list of regulatory commitments made within this submittal.

Susquehanna requests Nuclear Regulatory Commission (NRC) approval of the proposed changes and issuance of the requested license amendment by July 31, 2019. Once approved, the amendment shall be implemented within 60 days.

In accordance with 10 CFR 50.91, Susquehanna is providing a copy of this application, with attachments, to the designated Commonwealth of Pennsylvania state official.

Both the Plant Operations Review Committee (PORC) and the Nuclear Safety Review Board (NSRB) have reviewed the proposed changes.

Should you have any questions regarding this submittal, please contact Mr. Jason Jennings, Manager – Nuclear Regulatory Affairs, at (570) 542-3155.

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

Executed on: DEC 04 2018



K. Cimorelli

Enclosures:

1. Description and Assessment
2. Marked-Up Technical Specification Pages
3. Revised (Clean) Technical Specification Pages
4. Marked-Up Technical Specification Bases Pages (Provided for Information Only)
5. List of Regulatory Commitments

Copy: NRC Region I
Ms. L. H. Micewski, NRC Sr. Resident Inspector
Ms. T. E. Hood, NRC Project Manager
Mr. M. Shields, PA DEP/BRP

Enclosure 1 to PLA-7729

Description and Assessment

- 1.0 DESCRIPTION
- 2.0 PROPOSED CHANGES
- 3.0 BACKGROUND
- 4.0 TECHNICAL ANALYSIS
- 5.0 REGULATORY SAFETY ANALYSIS
 - 5.1 No Significant Hazards Consideration Determination
 - 5.2 Applicable Regulatory Requirements/Criteria
- 6.0 ENVIRONMENTAL CONSIDERATION

SUSQUEHANNA ASSESSMENT

1. DESCRIPTION

The proposed changes revise Technical Specification (TS) 3.8.3, “Diesel Fuel Oil, Lube Oil, and Starting Air,” by removing the current stored diesel fuel oil numerical volume requirements from the TS and replacing them with diesel operating time requirements. The TS are modified so that the stored diesel fuel oil inventory will require that a 7-day supply be available for each diesel generator. The numerical values will be placed in the TS Bases so that they may be modified under licensee control. This change is consistent with NRC-approved 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.” 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 May 26, 2010 (75 FR 29588), as part of the consolidated line item improvement process (CLIP).

2. PROPOSED CHANGES

The proposed changes revise TS 3.8.3, “Diesel Fuel Oil, Lube Oil, and Starting Air,” by removing the current stored diesel fuel oil numerical volume requirements from the TS and replacing them with diesel operating time requirements. The numerical values will be placed in the TS Bases so that they may be modified under licensee control. The TS are modified so that the stored diesel fuel oil will require that a 7-day supply be available for each diesel generator. As a result:

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

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 change 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 the Susquehanna Steam Electric Station (SSES), Units 1 and 2, the current reference is ANSI-N195. This application does not propose to modify the current ANSI-N195 reference.

Susquehanna Nuclear, LLC (Susquehanna), is 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 May 26, 2010 (75 FR 29588), as part of the CLIIP notice of availability. These variations are summarized below:

- No changes associated with lube oil inventory are included in this proposed change. Susquehanna currently monitors lube oil volume by ensuring that lube oil sump level is visible in the sight glass. With a lube oil level within the sight glass, the corresponding diesel generator has a 7-day supply of lube oil. Therefore, Condition B and SR 3.8.3.2 remain unchanged.

3. BACKGROUND

The background for this application is addressed by the model SE referenced in the NRC's Notice of Availability published on May 26, 2010 (75 FR 29588), and TSTF-501, Revision 1.

4. TECHNICAL ANALYSIS

Susquehanna has reviewed the model SE published in the *Federal Register* on May 26, 2010 (75 FR 29588), as part of the CLIIP Notice of Availability. Susquehanna has concluded that the technical justifications presented in the SE prepared by the NRC staff are applicable to SSES and, therefore, justify this amendment for the incorporation of the proposed changes to the SSES TS.

5. REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Determination

Susquehanna Nuclear, LLC (Susquehanna) has evaluated the proposed changes to the Technical Specifications (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 the TS by removing the current stored diesel fuel oil numerical volume requirements from the TS and replacing them with diesel operating time requirements. The numerical values will be placed in the TS Bases so that they may be modified under licensee control. The current stored diesel fuel oil numerical volume requirements are based on a 7-day supply. The TS are modified so that the stored diesel fuel oil inventory will require that a 7-day supply be available for each diesel generator.

Basis for the proposed no significant hazards determination: As required by 10 CFR 50.91(a), the Susquehanna 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 changes revise the TS by removing the current stored diesel fuel oil numerical volume requirements from the TS and replacing them with diesel operating time requirements. The numerical values will be placed in the TS Bases so that they may be modified under licensee control. For Diesel Generators A-D, 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 (RG) 1.137, Revision 0, "Fuel-Oil Systems for Standby Diesel Generators," and ANSI-N195 1976, "Fuel Oil Systems for Standby Diesel-Generators." For Diesel Generator E, the specific volume of fuel oil is calculated using the NRC-approved methodology described in RG 1.137, Revision 1 and ANSI-N195 1976. Because the requirement to maintain a 7-day supply of diesel fuel oil is not changed and is consistent with the assumptions in the accident analyses, and the actions taken when the volume of fuel oil is 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 changes do 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 changes revise the TS by removing the current stored diesel fuel oil numerical volume requirements from the TS and replacing them with diesel operating time requirements. The numerical values will be placed in the TS Bases so that they may be modified under licensee control. As the basis for the existing limits on diesel fuel 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.

Based on the above, Susquehanna concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

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 May 26, 2010 (75 FR 29588). Susquehanna has reviewed the NRC staff's model SE referenced in the CLIIP Notice of Availability and concluded that the regulatory evaluation section is applicable to SSES.

6. 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.

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Marked-Up Technical Specification Pages

Revised Technical Specifications Pages

Unit 1 TS Pages
3.8-20 and 3.8-22

Unit 2 TS Pages
3.8-23, 3.8-24, and 3.8-25

3.8 ELECTRICAL POWER SYSTEMS

3.8.3 Diesel Fuel Oil, Lube Oil, and Starting Air

LCO 3.8.3 The stored diesel fuel oil, lube oil, and starting air subsystems shall be within limits for each required diesel generator (DG).

APPLICABILITY: When associated DG is required to be OPERABLE.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each DG.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more DGs with fuel oil level <u>less than a 7 day supply and greater than a 6 day supply</u> , in associated storage tank < 47,570 gallons and > 41,018 gallons for DG A-D; < 60,480 gallons and > 52,340 gallons for DG E.	A.1 Restore fuel oil level to within limits.	48 hours
B. One or more DGs with lube oil sump level not visible in the sight glass.	B.1 Declare associated DG inoperable.	Immediately
C. One or more DGs with stored fuel oil total particulates not within limits.	C.1 Restore stored fuel oil total particulates to within limits.	7 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.3.1 Verify each fuel oil storage tank contains <u>≥ a 7 day supply of fuel.</u> ≥ 47,570 gallons for DG-A-D; ≥ 60,480 gallons for DG-E.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.2 Verify lube oil sump level is visible in the sight glass.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.3 Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4 -----NOTE----- Not required to be met when DG is operating. ----- Verify each DG air start receiver pressure is ≥ 240 psig.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.5 Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

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APPLICABILITY: When associated DG is required to be OPERABLE.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each DG.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more DGs with fuel oil level <u>less than a 7 day supply and greater than a 6 day supply</u> , in associated storage tank < 47,570 gallons and > 41,018 gallons for DG A-D; < 60,480 gallons and > 52,340 gallons for DG E.	A.1 Restore fuel oil level to within limits.	48 hours
B. One or more DGs with lube oil sump level not visible in the sight glass.	B.1 Declare associated DG inoperable.	Immediately
C. One or more DGs with stored fuel oil total particulates not within limits.	C.1 Restore stored fuel oil total particulates to within limits.	7 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more DGs with new fuel oil properties not within limits.	D.1 Restore stored fuel oil properties to within limits.	30 days
E. One or more DGs with one or more starting air receiver pressures < 240 psig and ≥ 180 psig.	E.1 Restore starting air receiver pressure to ≥ 240 psig.	48 hours
<p>F. Required Action and associated Completion Time of Condition A, B, C, D or E not met.</p> <p><u>OR</u></p> <p>One or more DGs with diesel fuel oil, lube oil, or starting air not within subsystem limits for reasons other than Condition A, B, C, D or E.</p>	F.1 Declare associated DG inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.3.1 Verify each fuel oil storage tank contains <u>≥ a 7 day supply of fuel.</u> ≥ 47,570 gallons for DG-A-D; ≥ 60,480 gallons for DG-E.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.2 Verify lube oil sump level is visible in the sight glass.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.3 Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4 -----NOTE----- Not required to be met when DG is operating. ----- Verify each DG air start receiver pressure is ≥ 240 psig.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.5 Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program

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Revised (Clean) Technical Specification Pages

Revised Technical Specifications Pages

Unit 1 TS Pages
3.8-20 and 3.8-22

Unit 2 TS Pages
3.8-23, 3.8-24, and 3.8-25

3.8 ELECTRICAL POWER SYSTEMS

3.8.3 Diesel Fuel Oil, Lube Oil, and Starting Air

LCO 3.8.3 The stored diesel fuel oil, lube oil, and starting air subsystems shall be within limits for each required diesel generator (DG).

APPLICABILITY: When associated DG is required to be OPERABLE.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each DG.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more DGs with fuel oil level less than a 7 day supply and greater than a 6 day supply.	A.1 Restore fuel oil level to within limits.	48 hours
B. One or more DGs with lube oil sump level not visible in the sight glass.	B.1 Declare associated DG inoperable.	Immediately
C. One or more DGs with stored fuel oil total particulates not within limits.	C.1 Restore stored fuel oil total particulates to within limits.	7 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.3.1 Verify each fuel oil storage tank contains \geq a 7 day supply of fuel.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.2 Verify lube oil sump level is visible in the sight glass.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.3 Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4 -----NOTE----- Not required to be met when DG is operating. ----- Verify each DG air start receiver pressure is \geq 240 psig.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.5 Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

3.8.3 Diesel Fuel Oil, Lube Oil, and Starting Air

LCO 3.8.3 The stored diesel fuel oil, lube oil, and starting air subsystems shall be within limits for each required diesel generator (DG).

APPLICABILITY: When associated DG is required to be OPERABLE.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each DG.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more DGs with fuel oil level less than a 7 day supply and greater than a 6 day supply.	A.1 Restore fuel oil level to within limits.	48 hours
B. One or more DGs with lube oil sump level not visible in the sight glass.	B.1 Declare associated DG inoperable.	Immediately
C. One or more DGs with stored fuel oil total particulates not within limits.	C.1 Restore stored fuel oil total particulates to within limits.	7 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more DGs with new fuel oil properties not within limits.	D.1 Restore stored fuel oil properties to within limits.	30 days
E. One or more DGs with one or more starting air receiver pressures < 240 psig and ≥ 180 psig.	E.1 Restore starting air receiver pressure to ≥ 240 psig.	48 hours
<p>F. Required Action and associated Completion Time of Condition A, B, C, D or E not met.</p> <p><u>OR</u></p> <p>One or more DGs with diesel fuel oil, lube oil, or starting air not within subsystem limits for reasons other than Condition A, B, C, D or E.</p>	F.1 Declare associated DG inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.3.1 Verify each fuel oil storage tank contains \geq a 7 day supply of fuel.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.2 Verify lube oil sump level is visible in the sight glass.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.3 Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4 -----NOTE----- Not required to be met when DG is operating. ----- Verify each DG air start receiver pressure is \geq 240 psig.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.5 Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program

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Marked-Up Technical Specification Bases Pages

Revised Technical Specifications Bases Pages

Unit 1 TS Bases Pages
3.8-47 and 3.8-49

Unit 2 TS Bases Pages
3.8-49 and 3.8-51

(Provided for Information Only)

BASES

APPLICABILITY (continued) and starting air are required to be within limits when the associated DG is required to be OPERABLE.

ACTIONS The ACTIONS Table is modified by a Note indicating that separate Condition entry is allowed for each DG. This is acceptable, since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable DG subsystem. Complying with the Required Actions for one inoperable DG subsystem may allow for continued operation, and subsequent inoperable DG subsystem(s) governed by separate Condition entry and application of associated Required Actions.

A.1

In this Condition, the 7 day fuel oil supply for a DG is not available. However, the Condition is restricted to fuel oil level reductions that maintain at least a 6 day supply. [The fuel oil level equivalent to a 6 day supply is 41,018 gallons for DG A-D and 52,340 gallons for DG E.](#) These circumstances may be caused by events such as:

- a. Full load operation required for an inadvertent start while at minimum required level; or
- b. Feed and bleed operations that may be necessitated by increasing particulate levels or any number of other oil quality degradations.

This restriction allows sufficient time for obtaining the requisite replacement volume and performing the analyses required prior to addition of the fuel oil to the tank. A period of 48 hours is considered sufficient to complete restoration of the required level prior to declaring the DG inoperable. This period is acceptable based on the remaining capacity (> 6 days), the fact that action will be initiated to obtain replenishment, the availability of fuel oil in the storage tank of the fifth diesel generator that is not required to be OPERABLE, and the low probability of an event during this brief period.

BASES

ACTIONS (continued)

E.1

With starting air receiver pressure < 240 psig in one or more air receivers, sufficient capacity for five successive DG start attempts can not be provided by the air start system. However, as long as all receiver pressures are > 180 psig, there is adequate capacity for at least one start attempt, and the DG can be considered OPERABLE while the air receiver pressure is restored to the required limit. A period of 48 hours is considered sufficient to complete restoration to the required pressure prior to declaring the DG inoperable. This period is acceptable based on the remaining air start capacity, the fact that most DG starts are accomplished on the first attempt, and the low probability of an event during this brief period. Entry into Condition E is not required when air receiver pressure is less than required limits following a successful start while the DG is operating.

F.1

With a Required Action and associated Completion Time of A through E not met, or the stored diesel fuel oil, lube oil, or starting air not within SR limits for reasons other than addressed by Conditions A, B, C, D or E, the associated DG may be incapable of performing its intended function and must be immediately declared inoperable.

SURVEILLANCE REQUIREMENTS

SR 3.8.3.1

This SR provides verification that there is an adequate inventory of fuel oil in the storage tanks to support DG's operation for 7 days at continuous rated capacity which is greater than the maximum post LOCA load demand. [The fuel oil level equivalent to a 7 day supply is 47,570 gallons for DG A-D and 60,480 gallons for DG E when calculated in accordance with References 2 and 3. The required fuel storage volume is determined using the most limiting energy content of the stored fuel. Using the known correlation of diesel fuel oil absolute specific gravity or API gravity to energy content, the required diesel generator output, and their corresponding fuel consumption rate, the onsite fuel storage volume required for 7 days of operation can be determined. SR 3.8.3.3 requires new fuel to be tested to verify that the density or API gravity is within the range assumed in the diesel fuel oil consumption calculations.](#) The 7 day period is sufficient time to place the unit in a safe shutdown condition and to bring in replenishment fuel from an offsite location.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

APPLICABILITY (continued) and starting air are required to be within limits when the associated DG is required to be OPERABLE.

ACTIONS The ACTIONS Table is modified by a Note indicating that separate Condition entry is allowed for each DG. This is acceptable, since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable DG subsystem. Complying with the Required Actions for one inoperable DG subsystem may allow for continued operation, and subsequent inoperable DG subsystem(s) governed by separate Condition entry and application of associated Required Actions.

A.1

In this Condition, the 7 day fuel oil supply for a DG is not available. However, the Condition is restricted to fuel oil level reductions that maintain at least a 6 day supply. [The fuel oil level equivalent to a 6 day supply is 41,018 gallons for DG A-D and 52,340 gallons for DG E.](#) These circumstances may be caused by events such as:

- a. Full load operation required for an inadvertent start while at minimum required level; or
- b. Feed and bleed operations that may be necessitated by increasing particulate levels or any number of other oil quality degradations.

This restriction allows sufficient time for obtaining the requisite replacement volume and performing the analyses required prior to addition of the fuel oil to the tank. A period of 48 hours is considered sufficient to complete restoration of the required level prior to declaring the DG inoperable. This period is acceptable based on the remaining capacity (> 6 days), the fact that action will be initiated to obtain replenishment, the availability of fuel oil in the storage tank of the fifth diesel generator that is not required to be OPERABLE, and the low probability of an event during this brief period.

BASES

ACTIONS
(continued)

E.1

With starting air receiver pressure < 240 psig in one or more air receivers, sufficient capacity for five successive DG start attempts can not be provided by the air start system. However, as long as all receiver pressures are > 180 psig, there is adequate capacity for at least one start attempt, and the DG can be considered OPERABLE while the air receiver pressure is restored to the required limit. A period of 48 hours is considered sufficient to complete restoration to the required pressure prior to declaring the DG inoperable. This period is acceptable based on the remaining air start capacity, the fact that most DG starts are accomplished on the first attempt, and the low probability of an event during this brief period. Entry into Condition E is not required when air receiver pressure is less than required limits following a successful start while the DG is operating.

F.1

With a Required Action and associated Completion Time of A through E not met, or the stored diesel fuel oil, lube oil, or starting air not within SR limits for reasons other than addressed by Conditions A, B, C, D or E, the associated DG may be incapable of performing its intended function and must be immediately declared inoperable.

SURVEILLANCE
REQUIREMENTS

SR 3.8.3.1

This SR provides verification that there is an adequate inventory of fuel oil in the storage tanks to support each DG's operation for 7 days at continuous rated capacity which is greater than the maximum post LOCA load demand. [The fuel oil level equivalent to a 7 day supply is 47,570 gallons for DG A-D and 60,480 gallons for DG E when calculated in accordance with References 2 and 3. The required fuel storage volume is determined using the most limiting energy content of the stored fuel. Using the known correlation of diesel fuel oil absolute specific gravity or API gravity to energy content, the required diesel generator output, and the corresponding fuel consumption rate, the onsite fuel storage volumes required for 7 days of operation can be determined. SR 3.8.3.3 requires new fuel to be tested to verify that the density or API gravity is within the range assumed in the diesel fuel oil consumption calculations.](#) The 7 day period is sufficient time to place the unit in a safe shutdown condition and to bring in replenishment fuel from an offsite location.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

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List of Regulatory Commitments

Regulatory Commitments Contained in this Correspondence

The following table identifies actions committed to in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

#	Regulatory Commitment	Due Date
7729-1	<p>Susquehanna commits to providing the following discussion in the Final Safety Analysis Report (FSAR):</p> <p style="padding-left: 40px;">The specific Diesel Generator fuel oil volumes contained in the Diesel Fuel Oil Storage Tanks necessary to ensure that DG run-duration requirements are met are calculated using Section 5.4 of ANSI N195-1976, "Fuel Oil Systems for Standby Diesel-Generators," and are based on applying the conservative assumption that the Diesel Generator is operated continuously at capacity. This fuel oil calculation methodology is one of the two approved methods specified in Regulatory Guide 1.137, Revision [0/1], "Fuel Oil Systems for Standby Diesel Generators," Regulatory Position [C/C.1.c].</p>	With the next FSAR update following implementation of this license amendment.

* Diesel Generators A-D are committed to Revision 0 of Regulatory Guide 1.137 whereas Diesel Generator E is committed to Revision 1. The FSAR will be updated differently for the A-D Diesel Generators than the E Diesel Generator to account for this difference in commitment. The portions of the commitment text in brackets above indicates what will change from the A-D to the E Diesel Generators.