

PROPOSED CHANGE TO THE
OPERATING LICENSE

- REVISIONS TO TS 3.8.1.1 & 3.8.1.2 -

(GGNS PCOL-90/13)

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A. SUBJECT

1. NL-90/09 Revised Minimum Storage Volumes for Fuel Oil Storage Tanks
2. Affected Technical Specifications:
 - a. LCO 3.8.1.1.b.2 - Page 3/4 8-1
 - b. LCO 3.8.1.2.b.2 - Page 3/4 8-9

B. DISCUSSION

Entergy Operations, Inc. is requesting revisions to the Technical Specifications which specify the minimum fuel oil volumes to be maintained in the fuel storage tanks for Diesel Generators 11, 12 and 13. Technical Specifications 3.8.1.1 and 3.8.1.2 currently require a minimum usable fuel oil volume of 57,200 gallons for Divisions I and II, and a Division III minimum usable fuel oil volume of 39,000 gallons. The new values are 62,000 and 41,200 gallons, respectively. The enclosed figure graphically depicts (not to scale) the fuel oil storage tanks and the various volumes of interest and is included only for information.

C. JUSTIFICATION

1. In accordance with Technical Specifications 3.8.1.1 and 3.8.1.2, and UFSAR commitments to Regulatory Guide (RG) 1.137 and ANSI N195-1976, the diesel generator storage tanks are required to contain sufficient fuel oil to operate each diesel generator for a duration of seven days while supplying post-LOCA maximum load demands. Previous calculations to determine the requisite volume of fuel oil indicated that a minimum usable volume of 57,186 gallons was needed for Divisions I and II to provide the seven day supply. Similar analyses for Division III indicated that the minimum usable volume was 38,077 gallons.
2. Recent reanalyses of these values, using the methodologies of RG 1.137 and ANSI N195-1976, have been completed using current diesel generator loading requirements for the seven day post-LOCA period, updated pump horsepower data, and revised fuel consumption values. These updated analyses indicate that the required minimum usable fuel oil volume in the Division I, II and III tanks is greater than that required by the current Technical Specifications. The old and new calculated values are:

TABLE I

	<u>Division I & II</u>		<u>Division III</u>	
	<u>OLD</u>	<u>NEW</u>	<u>OLD</u>	<u>NEW</u>
Minimum Usable Volume	57,186	61,914	38,077	41,158
Unusable Volume	<u>+8,200</u>	<u>+2,976</u>	<u>+8,200</u>	<u>+2,976</u>
Minimum Total Volume	65,386	64,890	46,277	44,134

3. As indicated in the Bases for TS 3.8.1.1 and 3.8.1.2, the fuel oil quantity specified in the Technical Specification is the "usable fuel", not the minimum fuel (i.e., usable plus unusable volumes) in the storage tanks. The proposed TS volume values are the calculated minimum usable volume values rounded up.
4. The unusable volume is the amount of fuel oil required to ensure adequate fuel oil transfer pump NPSH (4 inches above pump centerline) plus the volume of fuel oil beneath the centerline of the pump suction (8 inches off the tank bottom). Therefore, there is 1 foot of unusable fuel in the bottom of each storage tank. In the old calculations a value of two feet was used for the unusable fuel oil level.
5. The existing Technical Specification fuel oil storage requirements of 57,200 gallons for Divisions I and II and 39,000 gallons for Division III were based on an unusable volume of 8,200 gallons of fuel in each of the tanks. This results in total fuel oil storage requirements for Divisions I and II of 65,400 gallons and 47,200 gallons for Division III. The unusable volume of fuel in each of the tanks was recalculated to be 2,976 gallons. Therefore, even though the minimum required usable volumes (i.e., Technical Specification limits) increased, the existing total fuel oil storage surveillance procedures (considering the new unusable volume of 2,976 gallons) were and are adequate to ensure a sufficient volume of fuel oil exists to operate the diesel generators for seven days.

D. NO SIGNIFICANT HAZARDS CONSIDERATION

1. Entergy Operations, Inc. is proposing that Technical Specifications 3.8.1.1 and 3.8.1.2 be revised to provide higher minimum fuel oil storage requirements. These revisions would ensure that seven day fuel oil supply volumes are specified in the GGNS Technical Specifications.
2. The Commission has provided standards for determining whether a no significant hazards consideration exists as stated in 10CFR50.92(c). A proposed amendment to an operating license involves no significant hazards if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.
3. GGNS has evaluated the no significant hazards considerations in its request for a license amendment. In accordance with 10CFR50.91(a), GGNS is providing the following analysis of the proposed amendment against the three standards in 10CFR50.92:
 - a. No significant increase in the probability or consequences of an accident previously evaluated results from this change.

The Technical Specifications specify a minimum fuel oil inventory to ensure that the diesel generators will be able to maintain power to the necessary components and systems for at least seven days following a design basis accident. The seven day period complies with the requirements of ANSI N195-1976 and should provide adequate time for core recovery, accident mitigation and the recovery of alternate power sources or a replenishment of the fuel oil inventory. The proposed Technical Specification change ensures that the minimum usable fuel oil volume specified in the Technical Specifications meets the seven day supply requirement of the diesel generators. The proposed change complies with the guidance of Regulatory Guide 1.137 and ANSI N195-1976.

In providing compliance with regulatory guidance and ensuring the fuel oil supply requirements of the diesel generators are met, this change would not result in a significant increase in the probability or consequences of an accident previously evaluated.

- b. This change would not create the possibility of a new or different kind of accident from any previously analyzed.

Accident analyses which incorporate diesel generator operability and availability assume that the emergency generator will support the requisite loads. The proposed Technical Specification change ensures that an adequate fuel oil inventory will be available to support the requisite loads for seven days.

Therefore, the requested revisions will not create the possibility of a new or different accident from any previously analyzed.

- c. This change would not involve a significant reduction in the margin of safety.

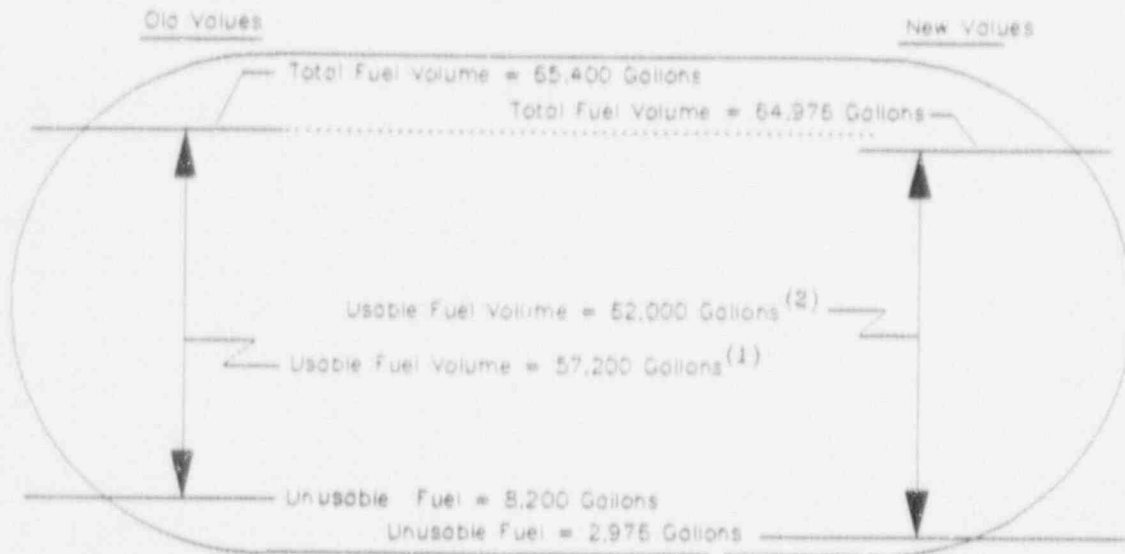
This change will not alter the margin of safety currently realized by our implementation of the existing Technical Specifications. As indicated in Table I above, the minimum total fuel oil volume that is presently allowed in the Divisions I and II tanks is 65,386 gallons. This value bounds the new minimum total volume of 64,890 gallons. In addition, the minimum total fuel oil volume currently allowed for Division III is 46,277 gallons. This bounds the new minimum total volume of 44,134 gallons. This proposed change to the Technical Specifications only redefines the values calculated for the usable and unusable fuel oil volumes. The proposed change does not alter the availability, operability, or surveillance requirements for the diesel generators.

Therefore, the proposed change will not involve a significant reduction in the margin of safety.

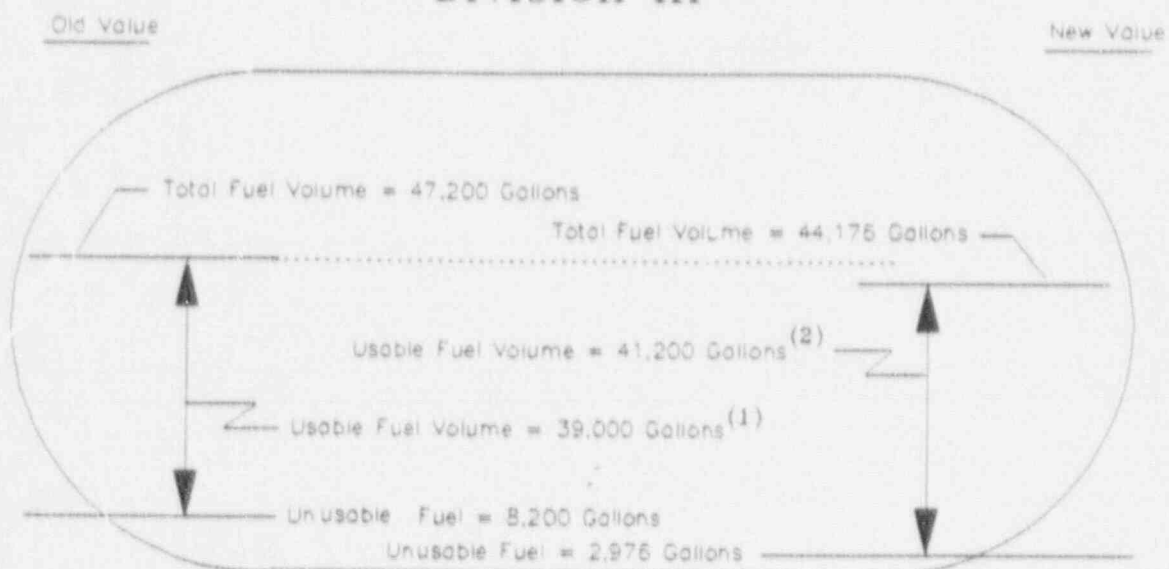
- 4. Based on the above evaluation, Entergy Operations has concluded that operation in accordance with the proposed amendment involves no significant hazards considerations.

Technical Specification Values

Diesel Generator Fuel Oil Storage Tank - Division I & II -



Diesel Generator Fuel Oil Storage Tank - Division III -



NOTES:

1. Value in existing Tech Specs
2. Value in TS PCOL

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3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

A.C. SOURCES - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Three separate and independent diesel generators, each with:
 1. Separate day fuel tanks containing a minimum of 220 gallons of fuel.
 2. A separate fuel storage system containing a minimum of:
 - a) ~~57,000~~ ^{62,000} gallons of fuel each for diesel generators 11 and 12, and
 - b) ~~30,000~~ ^{41,200} gallons of fuel for diesel generator 13.
 3. A separate fuel transfer pump.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With one offsite circuit of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Demonstrate the OPERABILITY of the remaining OPERABLE diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4* for one diesel generator at a time within 24 hours. Restore the offsite circuit to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With either diesel generator 11 or 12 of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the above required A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Demonstrate the OPERABILITY of the remaining OPERABLE diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4* within 24 hours. Restore the inoperable diesel generator to OPERABLE status within 72 hours from time of initial loss or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

*Specification 4.8.1.1.2.a.4 must be performed for diesel generator 13 only when the HPCS system is OPERABLE.

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ELECTRICAL POWER SYSTEMS

A.C. SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Diesel generator 11 or 12, and diesel generator 13 when the HPCS system is required to be OPERABLE, with each diesel generator having:
 1. A day tank containing a minimum of 220 gallons of fuel.
 2. A fuel storage system containing a minimum of:
 - a) ~~57,200~~ ^{62,000} gallons of fuel for each OPERABLE diesel generator 11 or 12.
 - b) ~~39,000~~ ^{41,200} gallons of fuel for diesel generator 13.
 3. A fuel transfer pump.

APPLICABILITY: OPERATIONAL CONDITIONS 4, 5 and *.

ACTION:

- a. With all offsite circuits inoperable and/or with diesel generators 11 and 12 inoperable, suspend CORE ALTERATIONS, handling of irradiated fuel in the primary or secondary containment, operations with a potential for draining the reactor vessel and crane operations over the spent fuel storage pool and the upper containment pool when fuel assemblies are stored therein. In addition, when in OPERATIONAL CONDITION 5 with the water level less than 22 feet 8 inches above the reactor pressure vessel flange, immediately initiate corrective action to restore the required power sources to OPERABLE status as soon as practical.
- b. With diesel generator 13 inoperable, restore the inoperable diesel generator 13 to OPERABLE status within 72 hours or declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.8.1.2 At least the above required A.C. electrical power sources shall be demonstrated OPERABLE per Surveillance Requirements 4.8.1.1.1, 4.8.1.1.2 and 4.8.1.1.3, except for the requirement of 4.8.1.1.2.a.5.

*When handling irradiated fuel in the primary or secondary containment.