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July 23, 2001

U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Attention: Document Control Desk

Subject: Technical Specification Bases Update to the NRC for Period Dated  
July 2001  
Grand Gulf Nuclear Station  
Docket No. 50-416  
License No. NPF-29

GNRO-2001/00056

Ladies and Gentlemen:

Pursuant to Grand Gulf Nuclear Station (GGNS) Technical Specification 5.5.11, Entergy Operations, Inc. hereby submits an update of all changes made to GGNS Technical Specification Bases since the last submittal (GNRO-2001/00044 letter dated May 23, 2001 to the NRC from GGNS). This update is consistent with update frequency listed in 10CFR50.71(e).

This letter does not contain any commitments.

Should you have any questions, please contact Mike Larson at (601) 437-6685.

Yours truly,

A handwritten signature in black ink, appearing to read "C. Bottemiller".

Charles A. Bottemiller  
Manager, Plant Licensing

MJL/mjl  
attachment: GGNS Technical Specification Bases Revised Pages  
cc: (See Next Page)

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**ATTACHMENT TO GNRO-2001/00056**

**GGNS Gulf Technical Specification Bases Revised Pages  
Dated  
July 20, 2001**

<b>LDC#</b>	<b>BASES PAGES AFFECTED</b>	<b>TOPIC of CHANGE</b>
99052	B 3.8-42, 42a, 43, 43a, & 46	Implementation of Technical Specification Amendment 147, diesel fuel oil capacity changes.

## B 3.8 ELECTRICAL POWER SYSTEMS

### B 3.8.3 Diesel Fuel Oil, Lube Oil, and Starting Air

#### BASES

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##### BACKGROUND

Each diesel generator (DG) is provided with a storage tank having a fuel oil capacity sufficient to operate that DG for a period of 7 days while the DG is supplying its surveillance testing capacity as prescribed by Technical Specifications (5740 KW for Division 1 and 2, 3300 KW for Division 3). This capacity exceeds the maximum post loss of coolant accident load demand (Ref. 1). The maximum load demand is calculated using the assumption that at least two DGs are available. This onsite fuel oil capacity is sufficient to operate the DGs for longer than the time to replenish the onsite supply from outside sources.

Fuel oil is transferred from each storage tank to its respective day tank by a transfer pump associated with each storage tank. Redundancy of pumps and piping precludes the failure of one pump, or the rupture of any pipe, valve, or tank to result in the loss of more than one DG. All outside tanks, pumps, and piping are located underground. The fuel oil level in the storage tank is indicated in the control room.

For proper operation of the standby DGs, it is necessary to ensure the proper quality of the fuel oil. Regulatory Guide 1.137 (Ref. 2) addresses the recommended fuel oil practices as supplemented by ANSI N195 (Ref. 3). The fuel oil properties governed by these SRs are the water and sediment content, the kinematic viscosity, specific gravity (or API gravity), and impurity level.

The DG lubrication system is designed to provide sufficient lubrication to permit proper operation of its associated DG 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 engine oil sump contains an 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.

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(continued)

BASES

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BACKGROUND  
(continued)

Each DG has an air start system with adequate capacity for five successive start attempts on the DG without recharging the air start receiver(s).

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(continued)

BASES (continued)

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APPLICABLE SAFETY ANALYSES The initial conditions of Design Basis Accident (DBA) and transient analyses in UFSAR, Chapter 6 (Ref. 4) and Chapter 15 (Ref. 5), assume Engineered Safety Feature (ESF) systems are OPERABLE. The DGs are designed to provide sufficient capacity, capability, redundancy, and reliability to ensure the availability of necessary power to ESF systems so that fuel, reactor coolant system, and containment design limits are not exceeded. These limits are discussed in more detail in the Bases for Section 3.2, Power Distribution Limits; Section 3.4, Reactor Coolant System (RCS); and Section 3.6, Containment Systems.

Since diesel fuel oil, lube oil, and starting air subsystems support the operation of the standby AC power sources, they satisfy Criterion 3 of the NRC Policy Statement.

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LCO Stored diesel fuel oil is required to have sufficient supply for 7 days of full load, i.e., 5740 KW for Division 1 and 2 and 3300 KW for Division 3 operation. It is also required to meet specific standards for quality. Additionally, sufficient lube oil supply must be available to ensure the capability to operate at full load for 7 days. This requirement, in conjunction with an ability to obtain replacement supplies within 7 days, supports the availability of DGs required to shut down the reactor and to maintain it in a safe condition for an anticipated operational occurrence (AOO) or a postulated DBA with loss of offsite power. DG day tank fuel requirements, as well as transfer capability from the storage tank to the day tank, are addressed in LCO 3.8.1, "AC Sources—Operating," and LCO 3.8.2, "AC Sources—Shutdown."

The starting air system is required to have a sufficient capacity for multiple DG start attempts without recharging the air start receivers.

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APPLICABILITY The AC sources, LCO 3.8.1 and LCO 3.8.2, are required to ensure the availability of the required power to shut down the reactor and maintain it in a safe shutdown condition after an AOO or a postulated DBA. Since stored diesel fuel

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BASES

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APPLICABILITY      oil, lube oil, and starting air subsystem support LCO 3.8.1  
(continued)      and LCO 3.8.2, stored diesel fuel oil, lube oil, and  
starting air are required to be within limits when the  
associated DG is required to be OPERABLE.

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(continued)

BASES

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ACTIONS  
(continued)

E.1

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

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SURVEILLANCE  
REQUIREMENTS

SR 3.8.3.1

This SR provides verification that there is an adequate inventory of fuel oil in the storage tanks to support each DG's operation for 7 days at its surveillance testing capacity as prescribed by Technical Specifications (5740 KW for Division 1 and 2, 3300 KW for Division 3). This capacity exceeds the maximum expected post LOCA loading. 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 31 day Frequency is adequate to ensure that a sufficient supply of fuel oil is available, since low level alarms are provided and unit operators would be aware of any large uses of fuel oil during this period.

SR 3.8.3.2

This Surveillance ensures that sufficient lube oil inventory is available to support at least 7 days of maximum expected post LOCA load operation for each DG. This requirement is based on the DG manufacturer's consumption values for the run time of the DG. Implicit in this SR is the requirement to verify the capability to transfer the lube oil from its storage location to the DG when the DG lube oil sump does not hold adequate inventory for 7 days of maximum expected post LOCA load operation without the level reaching the manufacturer's recommended minimum level.

A 31 day Frequency is adequate to ensure that a sufficient lube oil supply is onsite, since DG starts and run times are closely monitored by the plant staff.

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