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June 2, 2003

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
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Ladies and Gentlemen:

ULNRC-04854



**DOCKET NUMBER 50-483
CALLAWAY PLANT
UNION ELECTRIC COMPANY
REVISION TO TECHNICAL SPECIFICATION 3.8.3
"DIESEL FUEL OIL, LUBE OIL, AND STARTING AIR"**

AmerenUE herewith transmits an application for amendment to Facility Operating License No. NPF-30 for the Callaway Plant.

This proposed license amendment request (LAR) is being submitted per the guidance provided in Administrative Letter (AL) 98-10 as a correction to a Technical Specification (TS) that was found to be non-conservative in nature. This proposed change would revise TS 3.8.3, Condition A to increase the lower volume of fuel oil specified in the condition from 68,915 gallons to 69,300 gallons. The lower volume specified in this condition is the volume required to run the diesel generator at its continuous rating for six days. A new calculation was performed and it determined that the specified volume for the six day supply was non-conservative and needed to be increased. The new increased value is a more conservative value based on a calculation that accounts for the unuseable volume of fuel oil in the storage tank.

Attachments 1 through 4 provide the required Affidavit, Evaluation, Markup of TS pages, and Retyped TS pages.

It has been determined that this amendment application does not involve a significant hazards consideration as determined per 10 CFR 50.92. Pursuant to 10 CFR 51.22(b), no environmental assessment need be prepared in connection with the issuance of this amendment.

AW01

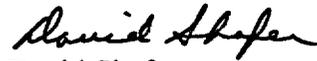
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If you have any questions on this amendment application, please contact Mr. Dave Shafer at (314) 554-3104.

Very truly yours,



David Shafer

Acting Manager, Regulatory Affairs

DJW/

- Attachments:
- 1) Affidavit
 - 2) Evaluation
 - 3) Markup of Technical Specification Page
 - 4) Retyped Technical Specification Page

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cc: U. S. Nuclear Regulatory Commission (Original and 1 copy)

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ATTACHMENT 2
EVALUATION

EVALUATION

1. DESCRIPTION
2. PROPOSED CHANGE
3. BACKGROUND
4. TECHNICAL ANALYSIS
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EVALUATION

1.0 DESCRIPTION

This proposed License Amendment Request (LAR) pursuant to 10 CFR 50.90 revises Technical Specification (TS) 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air." This proposed change would revise LCO Condition A to increase the lower volume of fuel oil specified in the condition from 68,915 gallons to 69,300 gallons for the required six day supply of fuel oil in the storage tank. This change is in response to a revised calculation, Reference 1 (see the reference listing in Section 7.0 herein), that determined that the current required six day volume of fuel oil in the fuel oil storage tank was non-conservative and needs to be increased. The new increased value is a more conservative value based on a calculation that accounts for the unuseable volume of fuel oil in the storage tank.

2.0 PROPOSED CHANGE

The proposed amendment would increase the minimum volume of fuel oil needed in the storage tank, to operate the diesel generator (DG) for 6 days at its continuous rating, from 68,915 gallons to 69,300 gallons.

There are no changes to the TS Bases or the Final Safety Analysis Report (FSAR) associated with this LAR.

Attachments 3 and 4 provide the TS markups and the retyped TS pages for this submittal.

3.0 BACKGROUND

The emergency diesel fuel oil storage and transfer system provides onsite storage and transfer of fuel oil to the diesel engines. This system is safety related and is required to function following a loss of offsite power to achieve and maintain the plant in a safe shutdown condition. Each diesel engine has its own individual fuel oil storage and transfer system consisting of an underground storage tank with a transfer pump, day tank, strainers and filters, piping, valves, instruments, and controls.

The capacity of each tank is based on the fuel consumption by one diesel engine for operation at continuous rating for 7 days. Within this period, additional fuel can be delivered to the plant site by truck.

LCO Condition A was added by Amendment # 133, Reference 2, to provide an Action and Allowed Outage Time (AOT) when the volume of fuel oil in the storage tank fell below the 7 day requirement of 80,400 gallons. This condition provides a volume range below 80,400 gallons but above 68,915 gallons that the storage tank can be in for a period of 48 hours prior to restoring the tank volume to 80,400 gallons. 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 that was obtained by dividing the 80,400 by 7 and multiplying by 6. These circumstances may be caused by events, such as full load operation required after an inadvertent start while at minimum required level, quantities used during surveillance testing, or feed and bleed operations, which may be necessitated by increasing particulate levels or any number of other fuel oil quality degradations. This restriction allows sufficient time for obtaining the requisite replacement volume and performing the analyses required prior to addition of fuel oil to the storage tank. The 48 hours is considered sufficient to complete restoration of the required level prior to declaring the DG inoperable because of the remaining capacity (>6 days) and the low probability of an event during this brief period. The proposed change to increase the volume from 68,915 gallons to 69,300 gallons is based on a new calculation, Reference 1, that accounted for only the useable volume of fuel oil in the storage tank, thus the required volume increased by 385 gallons. The change provides assurance that there is sufficient capacity for running the DG for 6 days and has already been implemented in the field.

4.0 TECHNICAL ANALYSIS

Design Basis of the Fuel Oil Storage and Transfer System

The emergency diesel engine fuel oil storage and transfer system provides onsite storage and transfer of fuel oil to the diesel engines. This system is safety related and is required to function following a loss of offsite power to achieve and maintain the plant in a safe shutdown condition. Following a loss of offsite power, the system provides onsite storage and delivery of fuel oil for at least 7 days of operation of the diesel generators at their continuous rating. Each diesel engine has its own independent fuel oil pumping train from the fuel oil storage tank to the day tank, with suitable tie lines normally isolated between the two flow paths. Level transmitters installed on the day tanks initiate the signals to start the transfer pumps on low level and stop the pumps on a high level. If the diesel generators are running, the transfer pumps will run continuously.

A fire detection signal from the diesel building will stop the fuel oil transfer pump. However, automatic diesel actuation will override any fire detection signal to preclude any spurious trips from the fire protection system under accident conditions.

The design of the fuel oil storage and transfer system provides complete redundancy; therefore no single failure will compromise the system's safety functions. All vital power can be supplied from either onsite or offsite power systems, as described in FSAR Sections 8.2 and 8.3, Reference 3.

The proposed change to the TS has no impact on the design basis or function of the emergency diesel engine fuel oil storage and transfer system. The system will continue to function in a manner consistent with the plant design basis.

Safety Significance

The Plant Class 1E AC electrical power distribution system AC sources consist of the offsite power sources (preferred power sources, normal and alternate), and the onsite standby power sources. The function of the onsite standby power sources (Train A and Train B diesel generators), is to provide an AC electrical power system that provides independence and redundancy to ensure an available standby source of power to the Engineered Safety Feature (ESF) systems. The onsite standby power source for each 4.16 kV ESF bus is a dedicated diesel generator. DGs NE01 and NE02 are dedicated to ESF buses NB01 and NB02, respectively. A DG starts automatically on a safety injection (SI) signal or on an ESF bus undervoltage signal. After the DG has started, it will automatically tie to its respective bus after offsite power is tripped as a consequence of ESF bus undervoltage or degraded voltage, independent of or coincident with an SI signal. The DGs will also start and operate in the standby mode without tying to the ESF bus on an SI signal alone. Following the trip of offsite power, a Load Shedder and Emergency Load Sequencer (LSELS) strips nonpermanent loads from the ESF bus. When the DG is tied to the ESF bus, loads are then sequentially connected to its respective ESF bus by the LSELS.

In the event of a loss of preferred power, the ESF electrical loads are automatically connected to the DGs in sufficient time to provide for safe reactor shutdown and to mitigate the consequences of a Design Basis Accident (DBA) such as a Loss of Coolant Accident (LOCA). Certain required plant loads are returned to service in a predetermined sequence in order to prevent overloading the DG in the process. Within 1 minute after the initiating signal is received, all loads needed to recover the plant or maintain it in a safe condition are returned to service.

Each DG is provided with a storage tank having a fuel oil capacity sufficient to operate that diesel for a period of 7 days while the DG is supplying maximum post loss of coolant accident load demand as discussed in FSAR Section 9.5.4.2, Reference 4. The maximum load demand is calculated based on the fuel consumption by one DG for operation at continuous rating for 7 days. This onsite fuel oil capacity is sufficient to operate the DGs for longer than the time needed to replenish the onsite supply from outside sources.

The proposed change to the TS has no impact on the ability of the DGs to provide power to the ESF loads needed to provide for safe reactor shutdown and to mitigate the consequences of a DBA. Both the old and new values provide an adequate volume of fuel oil for the DGs to fulfill their intended function for the 48 hours allowed by the AOT of TS Condition 3.8.3.A. The new value is a more conservative value based on a calculation that accounted for the unuseable volume of fuel oil in the storage tank.

Summary/Conclusion

The analyses presented above assess the potential impact of the proposed change on design basis and applicable safety analyses. The assessments demonstrate that the change will not adversely affect the design basis, safety analyses, or the safe operation of the plant.

5.0 REGULATORY SAFETY ANALYSIS

5.1 NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC)

This proposed amendment would revise the minimum volume of fuel oil in TS 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," that is needed in the emergency diesel fuel oil storage tank to operate the diesel generator for 6 days at its continuous rating from 68,915 gallons to 69,300 gallons. The proposed change does not involve a significant hazards consideration for Callaway Plant based on the three standards set forth in 10 CFR 50.92(c) as discussed below:

- (1) Do the proposed changes involve a significant increase in the probability or consequences of an accident previously evaluated?**

Response: No

Overall protection system performance will remain within the bounds of the previously performed accident analyses since there are no hardware changes. The design of the emergency diesel engine fuel oil storage and transfer system and the function of the onsite standby power sources will be unaffected. The only physical change is to increase the volume of fuel oil required to run the emergency diesel generators at their continuous rating for 6 days. This change has already been implemented in the field and is in the conservative direction. The fuel oil storage and transfer system will continue to function in a manner consistent with the plant design basis. All design, material, and construction standards that were applicable prior to this amendment request are maintained.

The probability and consequences of accidents previously evaluated in the FSAR are not adversely affected because the change to the volume of fuel oil required is conservative and is consistent with the safety analysis and licensing basis.

The proposed change will not affect the probability of any event initiators. There will be no degradation in the performance of, or an increase in the number of challenges imposed on, safety-related equipment assumed to function during an accident situation. There will be no change to normal plant operating parameters or accident mitigation performance.

The proposed change will not alter any assumptions or change any mitigation actions in the radiological consequence evaluations in the FSAR.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- (2) Do the proposed changes create the possibility of a new or different kind of accident from any previously evaluated?**

Response: No

There are no hardware changes nor are there any changes in the method by which any safety-related plant system performs its safety function. This amendment will not affect the normal method of plant operation or change any operating parameters. The proposed change does not induce a new mechanism that would result in a different kind of accident from those previously analyzed. No performance requirements or response time limits will be affected.

No new accident scenarios, transients precursors, failure mechanisms, or limiting single failures are introduced as a result of this amendment. There will be no adverse effect or challenges imposed on any safety-related system as a result of this amendment.

This amendment does not alter the performance of the emergency diesel engine fuel oil storage and transfer system in its support of the onsite standby power sources.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

(3) Do the proposed changes involve a significant reduction in a margin of safety?

Response: No

The proposed change does not eliminate any surveillances or alter the frequency of surveillances required by the Technical Specifications. The minimum volume of fuel oil required for a 6 day supply as specified in the TS has already been increased in the conservative direction. The safety analysis limits assumed in the transient and accident analyses are unchanged. None of the acceptance criteria for any accident analysis are changed.

There will be no effect on the manner in which safety limits or limiting safety system settings are determined nor will there be any effect on those plant systems necessary to assure the accomplishment of protection functions. There will be no impact on any margin of safety. The radiological dose consequence acceptance criteria listed in the Standard Review Plan will continue to be met.

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

Conclusion:

Based on the above, AmerenUE 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

The regulatory bases and guidance documents associated with the systems discussed in this amendment application include:

GDC-17 requires that an onsite electrical power system and an offsite electrical power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

GDC-18 requires that the electrical power systems important to safety be designed to permit appropriate periodic inspection and testing of important areas and features.

10CFR50.63 requires the plant be able to withstand for a specified duration and recover from a station blackout, loss of all alternating current power. The specified station blackout duration shall be based on the following factors: (i) The redundancy of the onsite emergency AC power sources; (ii) The reliability of the onsite emergency AC power sources; (iii) The expected frequency of loss of offsite power; and (iv) The probable time needed to restore offsite power.

NRC Regulatory Guide 1.137 discusses the recommendations for fuel oil systems for standby diesel generators. We describe the extent of our compliance with this regulatory guide in FSAR Table 9.5.4-3.

There have been no changes to the emergency diesel engine fuel oil storage and transfer system design such that compliance with any of the regulatory requirements and commitments above would come into question. The evaluations performed by AmerenUE confirm that Callaway Plant will continue to comply with all applicable regulatory requirements.

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 ENVIRONMENTAL CONSIDERATION

AmerenUE has determined that the proposed amendment would change requirements with respect to the installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, AmerenUE has evaluated the proposed change and has determined that the change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amount of effluent that may be released offsite, or (iii) a significant increase in the 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), an environmental assessment of the proposed change is not required.

7.0 REFERENCES

1. Calculation M-JE-321 ADD 4, dated 02/04/2003
2. OL Amendment No. 133, dated May 28, 1999
3. FSAR Chapter 8
4. FSAR Chapter 9

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ATTACHMENT 3

MARKUP OF TECHNICAL SPECIFICATION PAGE

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 subsystem 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 level < 80,400 gal and > 68,915 gal in storage tank.	A.1 Restore fuel oil level to within limits.	48 hours
B. One or more DGs with lube oil inventory < 750 gal and > 686 gal.	B.1 Restore lube oil inventory to within limits.	48 hours
C. One or more DGs with stored fuel oil total particulates not within limit.	C.1 Restore fuel oil total particulates within limit.	7 days
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

69,300

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ATTACHMENT 4

RETYPE TECHNICAL SPECIFICATION PAGE

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 subsystem 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
One or more DGs with fuel level < 80,400 gal and > 69,300 gal in storage tank.	Restore fuel oil level to within limits.	48 hours
One or more DGs with lube oil inventory < 750 gal and > 686 gal.	Restore lube oil inventory to within limits.	48 hours
One or more DGs with stored fuel oil total particulates not within limit.	Restore fuel oil total particulates within limit.	7 days
One or more DGs with new fuel oil properties not within limits.	Restore stored fuel oil properties to within limits.	30 days

(continued)