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DOCTYPE: LETTER NOTARIZED: YES  
SUBJECT:

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LTR 3 ENCL 40

FORWARDING LIC NOS DPR-31 & 41 APPL FOR AMEND: APPENDIX A TECH SPEC PROPOSED  
CHANGE CONCERNING REVISIONS TO SURVEILLANCE REQUIREMENTS FOR THE DIESEL  
GENERATOR UNITS UESED AS THE ONSITE A. C. PWR SOURCE AT SUBJECT  
FACILITY"S... NOTARIZED 09/08/78.

PLANT NAME: TURKEY PT #3  
TURKEY PT #4

REVIEWER INITIAL: XJM  
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\*\*\*\*\* DISTRIBUTION OF THIS MATERIAL IS AS FOLLOWS \*\*\*\*\*

ONSITE EMERGENCY POWER SYSTEMS.  
(DISTRIBUTION CODE A015)

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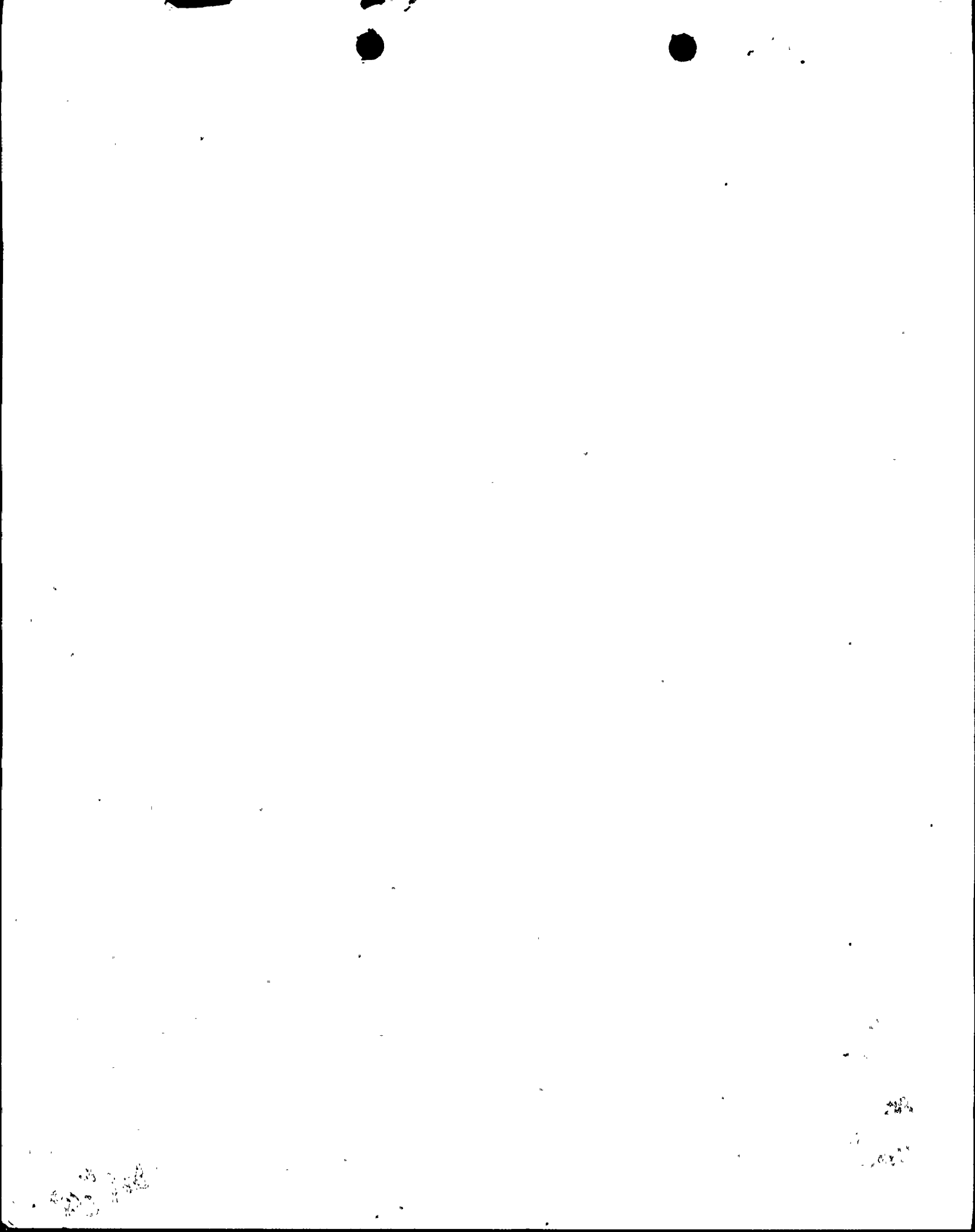
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App 2  
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September 8, 1978  
L-78-292

Director of Nuclear Reactor Regulation  
Attention: Mr. Victor Stello, Director  
Division of Operating Reactors  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Stello:

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Proposed Amendment to  
Facility Operating Licenses DPR-31 and DPR-41

In accordance with 10 CFR 50.30, Florida Power & Light Company submits herewith three (3) signed originals and forty (40) copies of request to amend Appendix A of Facility Operating Licenses DPR-31 and 41.

This proposed amendment relates to the surveillance requirements for the diesel generator units used as the onsite A.C. power source at Turkey Point Units 3 and 4. It is being submitted at the request of members of the NRC staff.

The staff request specified that our proposed technical specifications were to incorporate the requirements of Regulatory Guide 1.108 "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants." Based upon the information available to us at that time, at a meeting with members of the NRC staff on June 5, 1978, FPL agreed to comply with the testing requirements contained in Regulatory Guide 1.108 provided that these requirements would not necessitate any design changes. FPL has since reviewed in detail the Regulatory Positions contained in the guide; the results of that review and the manner in which we comply or will comply are contained in Attachment A.

Based upon our subsequent review and discussions with the diesel engine manufacturer, FPL believes that the requirements for testing frequency contained in Regulatory Position C.2.d should be modified for Turkey Point Units 3 and 4. Regulatory Guide 1.108 was originally issued in August 1977. Its inception therefore came several years after the diesel generator units at Turkey Point had been procured and installed and the Operating Licenses issued. Recent correspondence with our diesel engine manufacturer indicates that the testing requirements set forth in the guide are excessive and, if implemented, may lead to premature failures. Since it is in the best interest of all concerned parties that diesel engine surveillance enhance rather than degrade engine reliability, representatives from FPL and the diesel engine manufacturer would be willing to meet with the NRC for further discussion

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Mr. Victor Stello, Director

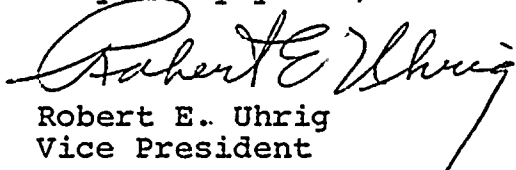
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of this issue.

The proposed technical specification changes are shown on the accompanying technical specification pages contained in Attachment B bearing the date of this letter in the lower right hand corner. These proposed changes have been reviewed by the Turkey Point Plant Nuclear Safety Committee and the Florida Power & Light Company Nuclear Review Board, They have concluded that this amendment does not involve an unreviewed safety question. They have further concluded that any additional testing requirements beyond those contained in Attachment B may constitute an unreviewed safety question due to the potential for degraded reliability of the diesel generator units.

FPL believes that the proposed amendment is fee exempt since it has been requested by the Commission and, as presented by FPL, has only minor safety significance. Therefore no amendment fee is required.

Very truly yours,

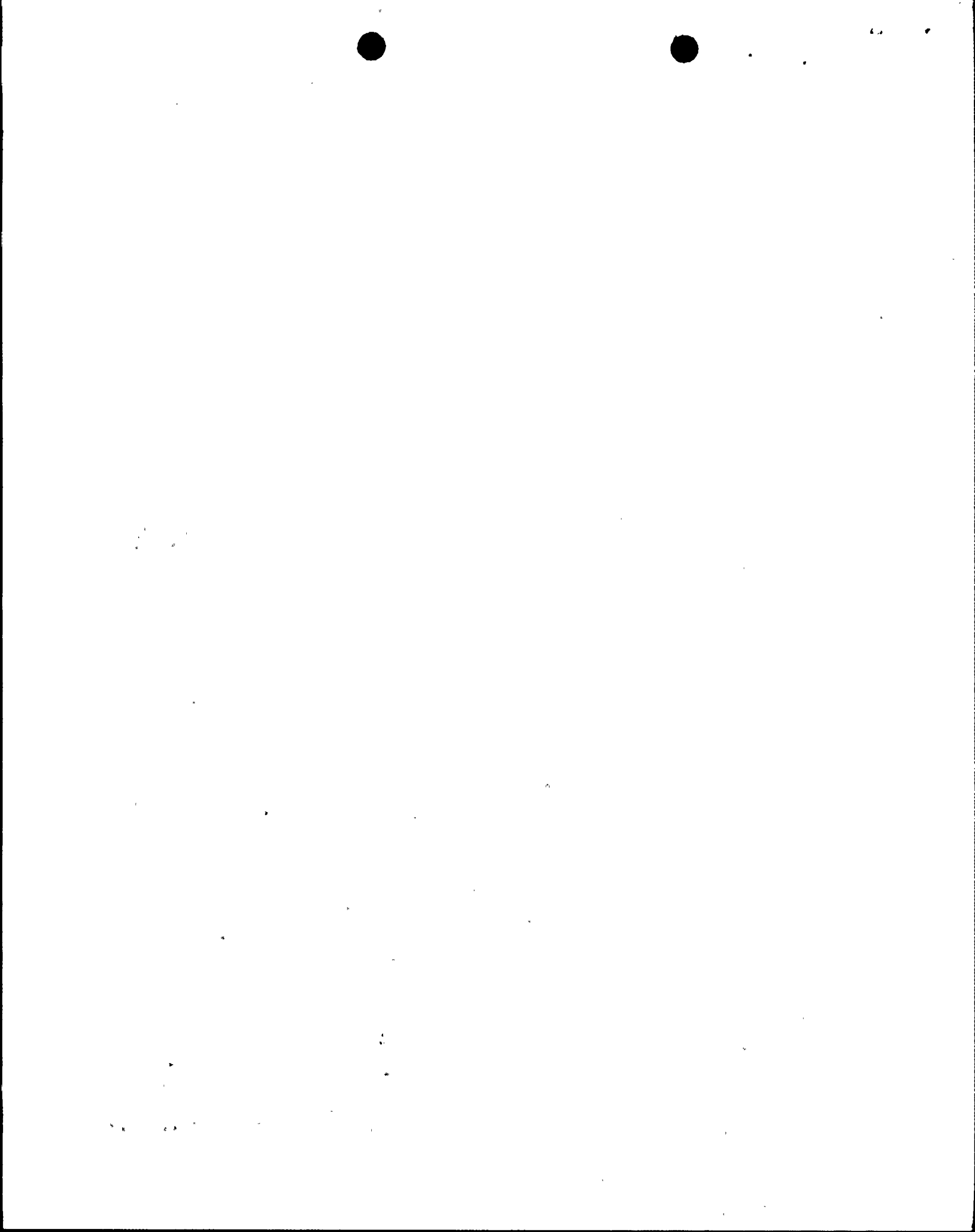


Robert E. Uhrig  
Vice President

REU:LLL:MAS:plt

Attachments

cc: Mr. James P. O'Reilly, Region II  
Harold F. Reis, Esquire



ATTACHMENT A

Re: Turkey Point Units 3 & 4  
Docket Nos. 50-250 and 50-251  
Evaluation of Proposed Technical Specifications  
Diesel Generator Units

C.2.a(1) Presently required by TS 4.8.1.b.

C.2.a(2) We concur with this section.

C.2.a(3) FPL proposes to include this as an 8 hour test. The diesel reaches equilibrium in 2 hours or less. Eight hours provides a factor of 4 over the time required to reach equilibrium temperature. Since we must perform both diesel generator and electrical switchgear preventative maintenance each outage, the 24 hour run would delay these items and therefore add unnecessary forced outage time.

C.2.a(4) We concur with the verification of generator capability to withstand the loss of the largest single load without tripping. Our D/G sets were designed to accommodate this degree of load rejection.

The loss of all load is an unnecessary test and poses a risk of significant damage to the D/G. However, it has been demonstrated once by preoperational test. To ensure that any control or governor system degradation is detected, we will add the voltage and frequency requirements suggested by the NRC, i.e., 4160 V  $\pm$  624 volts ( $\pm$  15%); 60 HZ  $\pm$  1.2 HZ ( $\pm$  2%), to the loss of the largest single load test.

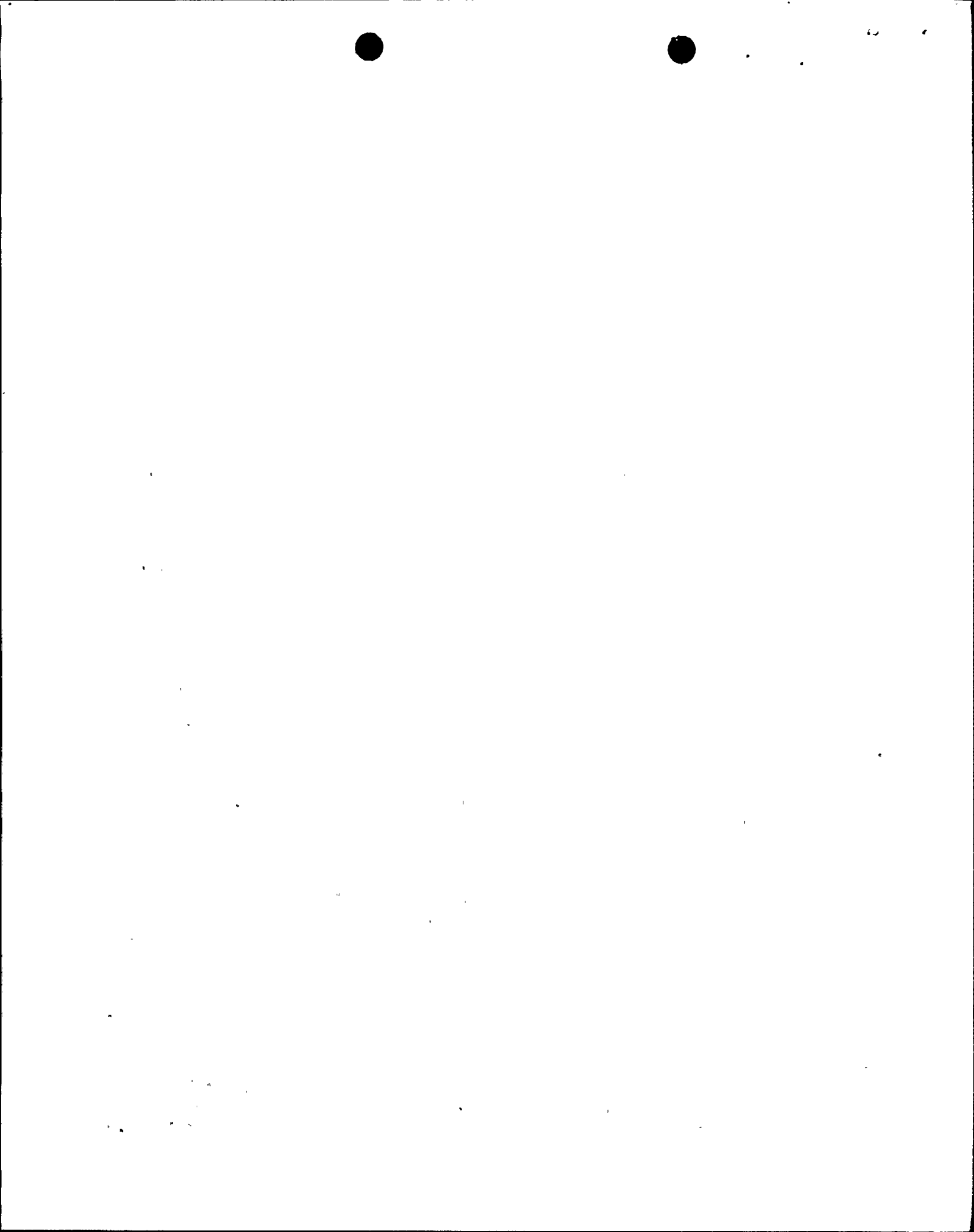
C.2.a(5) Although the vendor has stated that they have never experienced hot restart (vapor lock) failures, we agree to do a hot start within 15 minutes and load the D/G to full load rating.

Maintaining safety-related components in line-ups capable of producing the design accident loading sequence would preclude RCS/ECCS maintenance and delay each refueling. Therefore, we maintain that loading the D/G to full load meets the intent of C.2.a.(5) without unnecessarily delaying plant outages. Also, the sequencing controls are not affected in any manner by the temperature conditions of the D/G and this portion of the suggested testing merely duplicates C.2.a(2).

C.2.a(6) In order to do the monthly load test, it is necessary to synchronize the D/G and pick up load (which is greater than emergency load). This demonstrated synchronization. At the end of the monthly test the load is transferred to off-site power and the D/G is shutdown (after opening the output breaker) and returned to a standby line up.

Thus, the 18 month test is redundant to the already existing monthly periodic test.

C.2.a(7) Not applicable. By design, the Turkey Point engines have one fuel supply system.



- C.2.a(8) We maintain that this item should not be required because the necessary demonstration would include a rejection of full load by the diesel generator. As discussed under C.2.a(4) above, full load rejection poses a risk of significant damage to the diesel generator.
- C.2.b We concur with most of this section. However, we do not agree that the "every 10 years" portion is necessary. This is in reference to a design feature which is tested during the preoperational test program. We already have an administrative design control system, including retest requirements, as required by various NRC regulations to ensure that system design is not degraded.
- C.2.c(1) We concur with this item and include a requirement for verifying time for starting the D/G.
- C.2.c(2) We concur with this item. This requires assuming load at the "maximum practical rate". Since our system requires manual loading, we interpret this to be the maximum safe loading rate to ensure that the D/G is not over loaded. It should be noted that our standard practice has been to load the D/G expeditiously, and in any case it is impossible to even approach the design accident loading rate of about 2000 Kw in 33 seconds (FSAR Table 8.2-3).
- C.2.d We feel that the proposed increased testing frequencies are very undesirable and may lead to eventual degradation of the on-site emergency power system. Our diesel engine manufacturer shares our position that more frequent emergency starting creates a strong likelihood that the engine reliability will be degraded.
- Emergency startup is known to be one of the most stressful and wear producing evolutions possible and this section potentially increases the number of fast cold starts and rapid loadings by a factor of 10 over existing requirements.
- We would like to suggest that the NRC use an existing program which specifically addresses diesel generator reliability. The NRC Division of Inspection and Enforcement reviews all Licensee Event Reports and ensures that corrective action is prompt, appropriate and addresses generic or repeated failures. If the NRC feels D/G reliability is not being properly addressed, then an appropriate action might be to more fully implement the existing program, not to impose additional tests on equipment.
- C.3.b Regulatory Guide 1.108 reporting requirements are not the same as our present reporting requirements which are based on Regulatory Guide 1.16. We plan to continue reporting in accordance with Regulatory Guide 1.16 as implemented by Technical Specification 6.9.2.



ATTACHMENT B

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Proposed Technical Specifications  
Diesel Generator Units

MINIMUM FREQUENCIES FOR EQUIPMENT AND SAMPLING TESTS

11.	Reactor Coolant System Leakage	Evaluate	Daily	NA
12.	Spent Fuel Pit	Boron Concentration	Prior to refueling.	NA
13.	Secondary Coolant	I-131 Concentration	Weekly*†	10
14.	Vent Gas & Particulates	I-131 & Particulate Activity	Weekly*	10
15.	Fire Protection Pump & Power Supply	Operable	Monthly	45
16.	Turbine Stop and Control Valves, Reheater Stop and Intercept Valves	Closure	Monthly***	45
17.	LP Turbine Rotor Inspection (w/o rotor disassembly)	V, MT, PT	Every 5 Years	6 Years
18.	Spent Fuel** Cask Crane Interlocks	Functioning	Within 7 days of using crane to lift spent fuel cask	7 days when crane is being used to maneuver spent fuel cask

† N.A. during cold or refueling shutdowns. The specified tests, however, shall be performed prior to heatup above 200 F.

\*When activity exceeds 10% of specification, frequency shall be changed to daily.

\*\*In the interim period until the spent fuel cask crane interlocks are installed (installation is to be completed no later than June 1977) the following controls shall be used to prevent movement of the cask over spent fuel:

1. Indexing of the crane and trolley will be implemented.
2. Once properly positioned, the respective crane bridge and trolley drives will be de-energized as appropriate.
3. In addition, a mechanical bumper will be installed to limit trolley travel in the westward direction, such that movement of the spent fuel shipping cask over spent fuel is prevented.

## 4.8

## EMERGENCY POWER SYSTEM PERIODIC TESTS

Applicability: Applies to periodic testing and surveillance requirements of the emergency power system.

Objective: To verify that the emergency power system will respond promptly and properly.

Specification: The following tests and surveillance shall be performed as stated:

1. Diesel Generator

Each diesel generator shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying the fuel level in the day and engine-mounted fuel tank.
2. Verifying the fuel level in the fuel storage tank.
3. Verifying a fuel transfer pump can be started and transfers fuel from the Diesel Oil Storage Tank to the Day Tank.
4. Verifying the diesel starts from ambient condition and accelerates to provide a nominal 60 Hz frequency in  $\leq 15$  seconds.
5. Verifying the generator is synchronized, loaded to  $\geq 2500$  kw within 10 minutes and operates for  $\geq 60$  minutes.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank is within acceptable limits when checked for viscosity, water and sediment.

c. At least once per 18 months by:

1. Subjecting the diesel to an inspection in conjunction with its manufacturer's recommendations for this class of standby service.
2. Verifying the generator capability to reject a load of  $\geq 200$  kw without exceeding  $4160 \text{ V} \pm 624 \text{ V}$  and  $60 \text{ Hz} \pm 1.2 \text{ Hz}$ .
3. Simulating a loss of offsite power and a safety injection signal, and
  - a) Verifying de-energization and load shedding from 4160 Volt busses.

b) Verifying the diesels start from ambient condition on the auto-start signal, energize the 4160 volt busses, energize appropriate emergency loads through the load sequencing system, and operate for  $\geq 5$  minutes.

4. Verifying the diesel generator operates for a least 8 hours. During the first two hours of this test, the diesel generator shall be loaded to  $\geq 2750$  kw and during the remaining 6 hours the load shall be  $\geq 2500$  kw. Within 15 minutes after completing the 8 hour test, repeat Specification 4.8.1.a.5.

5. Verifying that the auto-connected loads to each diesel generator do not exceed 2750 kw.

## 2. Station Batteries

- a. The pilot cell specific gravity shall be read and recorded daily. The pilot cell shall be rotated on a monthly basis.
- b. Monthly the battery shall be given an equalizing charge, and afterwards specific gravity and voltage readings shall be taken and recorded for each cell. Water shall be added to restore normal level and total water use shall be recorded. Complete visual inspection of batteries shall be made monthly.
- c. Quarterly detailed visual inspection shall be made of chargers.
- d. Annually connections shall be checked for tightness and anti-corrosion coating shall be applied to interconnections.
- e. Perform load test annually.

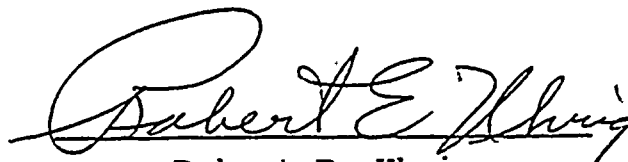
STATE OF FLORIDA )  
                          )  
COUNTY OF DADE )

SS.

Robert E. Uhrig, being first duly sworn, deposes and says:

That he is a Vice President of Florida Power & Light Company,  
the Licensee herein;

That he has executed the foregoing document; that the state-  
ments made in this said document are true and correct to the  
best of his knowledge, information, and belief, and that he  
is authorized to execute the document on behalf of said  
Licensee.

  
Robert E. Uhrig

Subscribed and sworn to before me this

8<sup>th</sup> day of September, 1978

Betty Brittain  
NOTARY PUBLIC, in and for the county of Dade,  
State of Florida

My commission expires: NOTARY PUBLIC STATE OF FLORIDA at LARGE  
MY COMMISSION EXPIRES MARCH 27, 1982  
BONDED THRU MAYNARD BONDING AGENCY

