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 FACIL:50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
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 RECIP.NAME RECIPIENT AFFILIATION
 EBNETER,S.D. Region 2 (Post 820201)

SUBJECT: Special rept:on 951215,4A EDG failed surveillance test.
 Caused by faulty voltage regulator.Voltage regulator
 replaced.

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10 CFR §50.36

Stewart D. Ebnetter
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
101 Marietta St., N.W., Suite 2900
Atlanta, GA 30323

Mr. Stewart D. Ebnetter:

Re: Turkey Point Unit 4
Docket No. 50-251
Special Report - 4A Emergency Diesel Generator Failure

In accordance with Technical Specifications 4.8.1.1.3, the attached Special Report details the 4A Emergency Diesel Generator failure of December 15, 1995.

Should there be any questions on this information please contact us.

Very truly yours,

Robert J. Hovey
Vice President
Turkey Point Plant

CLM

Attachment

cc: USNRC, Document Control Desk, Washington D.C.
Thomas P. Johnson, Senior Resident Inspector, USNRC,
Turkey Point Plant

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SPECIAL REPORT

4A EMERGENCY DIESEL GENERATOR FAILURE

PURPOSE:

Technical Specification 4.8.1.1.3, requires the submittal of a special report to the NRC in the event of a diesel generator failure. The Technical Specification requires the report to include the information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August, 1977.

BACKGROUND:

Florida Power and Light's (FPL) Turkey Point Nuclear Units 3 and 4 have two Emergency Diesel Generators (EDGs) for each unit. The Unit 3 EDGs were overhauled, and the Unit 4 EDGs installed, during the dual unit outage in 1990/1991.

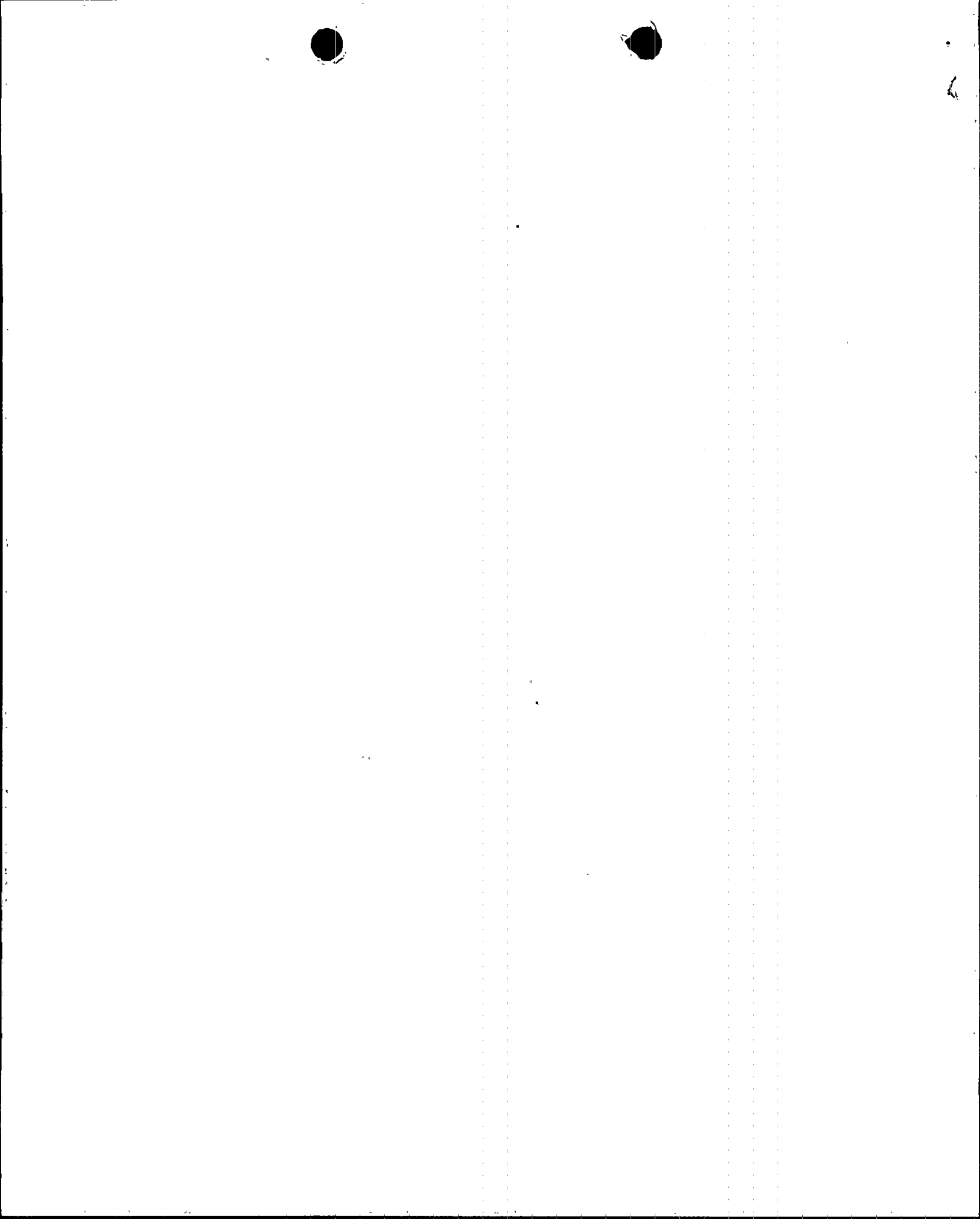
EVENT:

On December 15, 1995, the 4A EDG was being tested in accordance with surveillance procedure 4-OSP-023.1, Diesel Generator Operability Test. The operator was taking his last reading at the end of the one-hour full load run, when he noted that the output amps on the control room meter were full scale, and EDG voltage was about 4190 VAC. With these abnormal conditions the operator performed an "Emergency Stop" of the EDG.

A review of the ERDADS (Emergency Response Data Acquisition and Display System) printout showed that the 4A EDG output had increased to about 584 amps and 4193 VAC for approximately 3 seconds. Then the output increased to about 616 amps and 4203 VAC for 3 more seconds, at which point the EDG was stopped as stated above. The EDG output exceeded the half-hour rating of 4119 kVA by 3-9% for about 6 seconds. This overload is within the maximum momentary overload limit of standard MG 1-1987, section MG 1-22-41. Additionally, previous overloads of larger magnitude have been evaluated as acceptable.

After verifying that observable conditions were normal (feedback inputs to the voltage regulator, Silicon Controlled Rectifiers, Remote Gate Firing Module, Motor-Operated Potentiometer, Potential Transformer wiring, fuses, fuse holders, the system grid, etc.), the EDG was run for troubleshooting. About 30 minutes into the troubleshooting run, voltage spiking was observed during full load operation. The EDG was shut down and the voltage regulator was replaced.

On the subsequent run of the 4A EDG the voltage regulator preset voltage was adjusted and successfully tested at full load for one hour. An additional rapid start, a one-hour 100 percent load run, and a full load rejection test were successfully completed. The EDG was returned to service.



The following discussion addresses each of the areas listed in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August, 1977.

(1) DIESEL GENERATOR UNIT INVOLVED:

The 4A EDG failed its surveillance test.

(2) IDENTIFY THE FAILURE AS BEING THE N-TH FAILURE IN THE LAST 100 VALID TESTS:

This is the first failure in the last 60 valid tests; there have been only 60 valid tests since the EDG was installed.

(3) CAUSE OF FAILURE:

The cause of the 4A EDG failure was a faulty voltage regulator. The reason for the failure of the voltage regulator is not yet known.

(4) CORRECTIVE MEASURES TAKEN:

1. The failed voltage regulator has been returned to the vendor for root cause analysis.
2. The EDG was tested satisfactorily after the regulator was replaced.

(5) LENGTH OF TIME THE DIESEL GENERATOR WAS UNAVAILABLE:

The 4A EDG was unavailable for 33 hours, 43 minutes.

(6) DEFINITION OF CURRENT SURVEILLANCE TEST INTERVAL:

Unless a trigger value is exceeded (2 failures in the last 20 valid tests, or 5 failures in the last 100 valid tests), the normal surveillance frequency is every 31 days. This is the first failure in the last 20 valid tests, and the first failure since the EDG was installed in 1991 (60 valid tests). Therefore, the normal 31 day surveillance interval remains in effect for the 4A EDG.

(7) VERIFICATION OF TEST INTERVAL IN CONFORMANCE WITH REGULATORY POSITION C.2.d:

The current test interval is in conformance with the requirements of Regulatory Position C.2.d of RG 1.108, and Turkey Point Technical Specifications Table 4.8-1.

