UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

Report Nos.: 50-250/94-02 and 50-251/94-02

Licensee: Florida Power and Light Company
9250 West Flagler Street
Miami, FL 33102

Docket Nos.: 50-250 and 50-251 License Nos.: DPR-31 and DPR-41

Facility Name: Turkey Point 3 and 4

Inspection Conducted: February 14 - 18, 1994

Inspector: Paul J. Fillion 3/17/94
P. Fillion Date Signed

Approved by: M C Shymlock 3-17-94
M. Shymlock, Chief Date Signed
Plant Systems Section
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope:

This routine, announced inspection was conducted in the areas of station blackout rule and electrical maintenance.

Results:

In the areas inspected one Non-Cited Violation for failing to report a valid emergency diesel generator failure was identified, which is described in section 3. The overall conclusion with regard to maintenance was that the licensee's performance was good, because corrective actions related to the work orders reviewed were complete. In the area of station blackout rule, no problems were identified. The licensee's analysis and plant configuration were consistent with the submittals reviewed and approved by the NRC staff.

REPORT DETAILS

1.0 Persons Contacted

Licensee Employees

*C. Bible, Electrical Engineer
L. Bleeker, Electrical Engineer
J. Freyre, System Engineer
*D. Jernigan, Operations Manager
*R. Kundalkar, Engineering Manager
*W. Pearce, Plant Manager
*M. Pearce, Supervisor, Electrical Maintenance
*D. Powell, Technical Support Manager
R. Rajan, Electrical Maintenance Engineer
*G. Soloman, Regulatory Compliance
*T. Sweeney, Electrical Engineer
*M. Wayland, Maintenance Manager

Other licensee employees contacted during this inspection included engineers, technicians and administrative personnel.

Other NRC Employees

*B. Desai, Resident Inspector
*T. Johnson, Senior Resident Inspector
L. Trocine, Resident Inspector

*Attended exit meeting

2.0 Station Blackout Rule (92701)

10 CFR Part 50.63 requires that plants be able to cope with a loss of alternating current (AC) power sources. Regulatory Guide 1.155 defines which AC sources must be postulated to fail, specifies the required coping duration and provides guidance on how to demonstrate that the station blackout rule has been met. Nuclear Management Resources Council (NUMARC) document 87-00, Rev 1, provides guidance and methodologies for implementing the NUMARC station blackout initiatives

Pursuant to 10 CFR Part 50.63, the licensee made submittals describing their approach to meeting the station blackout rule. The initial submittal was made on April 17, 1989. Supplementary submittals were made on March 29, July 20, and September 21, 1990; and May 14, 1991. In addition, a site audit was performed by a joint Nuclear Regulatory Commission (NRC)/consultant team headed by a NRC staff member on October 17-19, 1989. The NRC's safety evaluation was issued on June 15, 1990, and a supplemental safety evaluation was issued on July 31, 1991. These documents were reviewed by the inspector during the preparation phase of the inspection.

The essential feature of the licensee's approach to meeting the station blackout rule is that they have demonstrated by analysis that the plant has excess emergency diesel generator capacity and system capability to cope with a loss of AC sources. The emergency diesel generators can supply the necessary power for eight hours and recover from this event.

The inspector reviewed the emergency diesel generator load list for station blackout. Worst case loading was 2,411 kW as compared to the emergency diesel generator rating 2,850 kW. This loading analysis was contained in Drawing No. 5613-E-1713, Rev 3. The inspector reviewed the system capability for interconnecting buses by reviewing the one-line diagrams. Related operating procedure, EOP-ECA-0.1, Loss of All AC Power Recovery Without SI Required, was reviewed, and was adequate. The plan for the restoration of offsite power in the event of a total Transmission System collapse was reviewed, and was adequate. This plan was contained in the Power System Emergency Restoration Manual, dated February 1992. The reliability of emergency diesel generators 3A, and 4A was equal to 1.0 in the last 100 demands. Emergency diesel generator 3B had one failure in the last 100 demands (refer to discussion in section 3.0). Emergency diesel generator 4B had a reliability of 0.90 in the last 20 demands and was being tested once per seven days. The target reliability of 0.95 was the licensee guide.

The inspector's review in the area of station blackout rule did not identify any significant problems. The system configuration was as described in the station blackout submittals, with modifications having been implemented in the major dual unit outage of 1991. Adequate procedures were in place to support the station blackout rule.

3.0 Electrical Maintenance (62705)

Electrical maintenance activities were reviewed with the objective of determining whether corrective actions for the various work request maintenance problems were adequate. The inspector reviewed the summary of electrical corrective maintenance covering a period of time from the end of the major dual unit outage, which ended October 1991, until the time of the inspection. The plant experienced a severe hurricane on August 24, 1992, and did not return to normal operation until November 1992. The summary had 210 entries. Sixty-six work request documents were selected for further review.

A problem identified during the review was that a failure of an emergency diesel generator breaker which represented a valid emergency diesel generator failure had not been recorded in the Emergency Diesel Generator Reliability Test Program, TDI-TECH-006. On November 18, 1992, while performing a test on the 3B emergency diesel generator, the generator breaker failed to close on demand. The cause of this failure was restricted movement of the closing latch mechanism. The cause of the restricted movement was a bent charge/discharge indicator gear, which is part of the mechanism which gives indication of spring charge status on the front of the breaker. The breaker failure and correction of the problem was recorded in Work Order Number 92055209. Since the

emergency diesel generator, at the time of this failure, was being tested to prove it was operable prior to returning to power following the forced hurricane outage, the generator breaker failure to close on demand represented a valid emergency diesel generator failure. However, the failure was not recorded in the Emergency Diesel Generator Reliability Program and a Special Report was not submitted pursuant to Technical Specification 4.8.1.1.3, Reports. During the inspection, the licensee agreed that a Special Report should have been submitted, and they stated that it will be submitted within 30 days. Failure to submit the Special Report is a violation of NRC requirements. This NRC identified violation is not being cited because criteria specified in Section VII.B of the NRC Enforcement Policy were satisfied. The violation was of minor safety significance because the actual hardware problem was properly documented and corrected. This matter is identified as non-cited violation NCV 50-250/94-02-01, Failure to Report an Emergency Diesel Generator Failure.

Walkdown inspections were performed by the inspector of the following equipment: emergency diesel generator buildings, vital battery rooms and control room annunciator panel (electrical section). Only one problem condition was identified during these inspections. The inspector observed that rain water was dripping onto cells 36 and 37 of the 3B vital battery from a vent opening in the roof. The licensee immediately dried off the vital battery, and placed a temporary cover over the cells which could be affected by the leak. They also wrote a Work Order to find and correct the source of the leaking. The inspection took place while an exceptionally hard rainstorm was in progress. As far as could be determined, the leak had not been apparent in the past. It could have been the result of hurricane damage, with leaking only being observed during exceptionally hard rains.

The inspector's overall conclusion with regard to electrical maintenance was that the licensee's performance was good in that the corrective actions for the various work request problems were complete and thorough. The problems were properly documented with the exception of the Special Report on the emergency diesel generator failure. The problem with the leak in the battery room roof was not seen as a weakness in the licensee's program.

4.0 Exit Meeting

The inspection scope and results were summarized on February 18, 1994, with those persons indicated in section 1. The inspector described the areas inspected and discussed in detail the inspection results including the item listed below. Dissenting comments were not received from the licensee.

Item Number	Description and Reference
250/94-02-01	Non-cited Violation - Failure to Report a Diesel Generator Failure. The categorization of this finding as a violation was communicated to the licensee during a meeting at the Region II office on March 15, 1994.