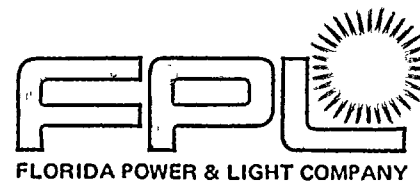


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AUG 1 3 1988

L-86-338

Dr. J. Nelson Grace
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
101 Maietta Street, N. W., Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250, 50-251
Inspection Report 86-24 and 86-24

Florida Power & Light Company has reviewed the subject inspection report, and a response is attached.

There is no proprietary information in the report.

Very truly yours,

C. O. Woody
Group Vice President
Nuclear Energy

COW/SAV:aa

Attachment

cc: Harold F. Reis, Esquire

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Q PDR

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IE 07/11

PEOPLE...SERVING PEOPLE

2.3

1:00 PM



ATTACHMENT

Turkey Point Units 3 and 4
Docket No. 50-250, 50-251
IE Inspection Report 250-86-24 & 251-86-24

FINDING:

10 CFR 50, Appendix B, Criterion XVI, as implemented by FPL Topical Quality Assurance Report (FPL TQAR) 1-76A (Rev. 8) and Topical Quality Requirement (TQR) 16.0 (Rev. 4), requires that in the case of significant conditions adverse to quality, that measures shall assure that the cause of the condition is determined and corrective actions are taken to preclude repetition.

Contrary to the above, after the NRC resident inspection staff identified that prior to August 14, 1985, no operator training had been provided on the use of Gamma Metrics neutron flux monitor pursuant to licensee commitments, the licensee's corrective actions failed to preclude repetition, in that, replacement Hot License Class 10 operators receiving licenses after February 1986, were not provided training in the use of the Gamma Metrics neutron flux monitor.

RESPONSE:

- 1) FPL concurs with the finding.
- 2) The Training Department failed to consider the need of the Group 10 license candidates for this training due to an oversight.
- 3) The Group 10 license candidates have been trained in the use of Gamma Metrics neutron flux monitors.
- 4) The Training Department has evaluated the process for dealing with training for plant modifications. The results of this evaluation indicate that this is an isolated incident and not a result of deficiencies in the existing program. The personnel involved have been counseled to ensure that in the future they implement the process as designed.
- 5) a) Full compliance for Item 3 above was achieved by April 23, 1986.
b) Full compliance for Item 4 above was achieved by August 1, 1986.

NOTICE OF DEVIATION:

A Confirmation of Action letter issued to FPL on April 2, 1986, confirmed that the total loads on emergency diesel generators would be reduced to no more than 2845 KW and that procedures would be changed to ensure operation within this limitation.

Contrary to the above, the licensee failed to adequately revise procedures to assure operation of the emergency diesel generators within load limitations, in that:



Deviation a:

Operating procedure 4-OP-006 was not revised to ensure that the Confirmation of Action letter specified emergency diesel generator load limit of 2845 KW was not exceeded. On April 14, 1986, this procedure was utilized to crosstie the 4B 480 volt load center to the 4A 480 volt load center without a safety evaluation to ensure that the Confirmation of Action letter load limit would not be exceeded for emergency diesel generator A under accident conditions. The use of 4-OP-006 placed the plant in a condition outside of the assumptions in a justification for continued operation contained in JPE-L-86-59, Revision 1 for the operation of Unit 3.

RESPONSE:

- 1) FPL concurs with the deviation in that the 4B 480 volt load center was cross-tied to the 4A 480 volt load center without a safety evaluation to ensure that EDG loading limits would not be exceeded. However, the Operations Department had taken an additional conservative measure, not required by the EDG loading evaluation, JPE-L-86-59, Revision 1, of deenergizing the 4D normal containment cooler (powered from the 4B 480 volt load center) and taking it out of service on a clearance. In addition, with Unit 4 in cold shutdown, certain engineered safety feature equipment (not required for Unit 3 operation) was also taken out of service to prevent operation. Therefore, it was felt that the EDG loading limits would not be exceeded.
- 2) The reason for the deviation was that this procedure was not identified as requiring a change during the initial review of JPE-L-86-59, Revision 1.
- 3) a) A safety evaluation of the April 14, 1986 alignment of the 4B loads and their affect on total EDG loading was performed by our Engineering Department. The results of this evaluation indicated that the conservative measure taken by the Operations Department resulted in an actual reduction of design basis accident EDG loading by 43 KW during the time the 4B load center was cross-tied to the 4A load center. Therefore, the evaluation concluded that the loading on the EDGs would not have exceeded the limits specified in the EDG loading evalution, JPE-L-86-59, Revision 1.

b) 3(4)-OP-006 has been revised to incorporate a caution in the infrequent operations section of the procedure that states that unless both units are in a cold shutdown, the 480 volt load center cross-tie breakers shall be racked out and tagged in accordance with AP 0103.4, In-Plant Equipment Clearance Orders. These breakers may be closed only in accordance with Technical Specifications, a safety evaluation, or as directed by the Technical Support Center Staff when activated under the emergency plan.
- 4) After this incident, clearance tags were placed on the 480 volt tie breakers to preclude recurrence. A letter was issued to plant supervisors, nuclear, emphasizing that no electrical system cross connects between trains can be made without first discussing the new alignment with the Engineering Department.

10-10-10



1. The first part of the report is a general description of the project. It includes the title, the objectives, and the scope of the work. The title is "A Study of the Effect of Temperature on the Rate of Reaction of Hydrogen Peroxide with Potassium Iodide". The objectives are to determine the effect of temperature on the rate of reaction and to determine the activation energy of the reaction. The scope of the work is to study the reaction at temperatures ranging from 10°C to 50°C.

2. The second part of the report is a description of the experimental procedure. It includes the materials and equipment used, the method of preparation of the solutions, and the method of measurement of the rate of reaction. The materials and equipment used are potassium iodide, hydrogen peroxide, sulfuric acid, and a thermometer. The method of preparation of the solutions is to weigh a certain amount of potassium iodide and dissolve it in a certain volume of water. The method of measurement of the rate of reaction is to measure the time taken for a certain amount of iodine to be produced.

3. The third part of the report is a description of the results of the experiment. It includes a table of the data obtained, a graph of the rate of reaction against temperature, and a calculation of the activation energy. The data obtained are as follows:

Temperature (°C)	Time taken for iodine to be produced (s)
10	120
20	60
30	30
40	15
50	8

The graph of the rate of reaction against temperature is as follows:

The graph shows that the rate of reaction increases exponentially with temperature. The activation energy of the reaction is calculated to be 50 kJ/mol.

4. The fourth part of the report is a discussion of the results. It includes a comparison of the results with those obtained by other workers, a discussion of the factors that affect the rate of reaction, and a conclusion. The results obtained are in good agreement with those obtained by other workers. The factors that affect the rate of reaction are temperature, concentration, and the presence of a catalyst. The conclusion is that the rate of reaction increases with temperature and that the activation energy of the reaction is 50 kJ/mol.

5. The fifth part of the report is a list of references. It includes the names of the authors, the titles of the papers, and the names of the journals. The references are as follows:

1. Smith, J. D. "The Effect of Temperature on the Rate of Reaction of Hydrogen Peroxide with Potassium Iodide." *Journal of Chemical Education*, 1965, 42, 123-125.
2. Jones, A. B. "The Effect of Concentration on the Rate of Reaction of Hydrogen Peroxide with Potassium Iodide." *Journal of Chemical Education*, 1968, 45, 234-236.
3. Brown, C. E. "The Effect of a Catalyst on the Rate of Reaction of Hydrogen Peroxide with Potassium Iodide." *Journal of Chemical Education*, 1970, 47, 345-347.



- 5) a) Full compliance for Item 3.a above was achieved by April 14, 1986.
- b) Full compliance for Item 3.b above was achieved on July 28, 1986.
- c) Full compliance for Item 4 above was achieved by April 17, 1986.

DEVIATIONS b & c:

- b. Emergency Operating Procedure 3-ECA-0.0, Loss of All AC Power, did not ensure that an RHR pump would be secured and a battery charger restored within 30 minutes to prevent overloading an emergency diesel generator (EDG) with a loss of all AC power on Unit 3. Attachment E of ECA 0.0 also did not contain direction to ensure that in the one EDG available case, that the battery charger is restored utilizing the normal bypass switch. Utilizing the "reset switch", which is the normal method of restoration, could potentially overload the EDG.
- c. Attachment E of 3-EOP-E-0, Step 2, directed the operator to restart a computer room chiller within one hour following a reactor trip and loss of offsite power. Starting a computer chiller (59 KW) prior to securing a containment spray pump could potentially overload an EDG. Specific precautions to ensure the computer room chillers were not restarted until after the containment spray pumps are secured were not contained in Attachment E of 3-OP-E-0.

RESPONSE:

- 1) FPL concurs with the deviation.
- 2) The reason for the deviation was that the correct version of the procedures had been approved by the Plant Nuclear Safety Committee, however, an earlier version of the procedures had inadvertently been given to Document Control for distribution. The earlier version had outdated information on EDG loading capability.
- 3) The corrected procedures, consistent with the EDG justification for continued operation, were reissued to Document Control for distribution.
- 4) The word processing procedures have been revised to provide additional assurance that only the final approved versions of procedures are sent to Document Control for distribution.
- 5) a) Full compliance for Item 3 above was achieved by April 6, 1986.
- b) Full compliance for Item 4 above was achieved by August 1, 1986.

