



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

Report Nos.: 50-250/86-09 and 50-251/86-09

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 24-28, 1986

Inspector: *T. E. Conlon* for 3-31-86
W. H. Miller Date Signed

Approved by: *T. E. Conlon* 3-31-86
T. E. Conlon, Section Chief Date Signed
Plant Systems Section,
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, announced inspection entailed 38 inspector-hours on site in the areas of fire protection/prevention and followup on previously identified inspection items.

Results: Three violations were identified - Excessive Time Between Required Technical Specification Surveillance Tests on the Fire Protection Systems - paragraph 5.c; Failure to conduct an Independent Fire Protection and Loss Prevention Inspection and Audit for 1985 - paragraph 5.d; and Excessive Time Between Shift Fire Brigade Drills - paragraph 5.e.(2).

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *B. A. Abrishami, Technical Department Supervisor
- *R. J. Acosta, QA Supervisor
- *J. Arias, Jr., Regulation & Compliance Supervisor
- *C. J. Baker, Plant Manager
- P. M. Banaszak, Site Engineering
- L. W. Bladow, QA Supervisor
- J. Crockford, Systems Enhancement Coordinator
- J. Farrare, QA
- *D. Grandage, Operations Superintendent
- *J. W. Kappes, Maintenance Supervisor
- *R. W. Kemmer, Fire Protection Supervisor
- *G. R. Madden, Nuclear Licensing
- J. P. Mendieta, Services Manager
- *W. C. Miller, Training Superintendent
- *T. Ross, QC
- *J. Smallwood, Fire Inspection
- *G. J. Traczyk, Fire Protection Coordinator
- *C. M. Wethy, Site Vice President

Other licensee employees contacted included maintenance craftsmen, engineers, technicians, operators, mechanics, security force members and office personnel.

NRC Resident Inspectors

- *T. A. Peebles
- D. R. Brewer

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on February 28, 1986, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. The following items were identified:

- Inspector Followup Item (250, 251/86-09-01), Implementation of a Smoke Detector Sensitivity Test Program - paragraph 5.b.

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1. The first part of the document discusses the general situation of the country and the role of the government in the economy. It mentions the need for a comprehensive economic reform and the importance of maintaining social stability.

2. The second part of the document deals with the specific measures to be taken in the areas of agriculture, industry, and services. It emphasizes the need for modernization and the improvement of the quality of goods and services.

3. The third part of the document discusses the social and cultural aspects of the reform. It mentions the need for education and the improvement of the living standards of the population.

4. The fourth part of the document discusses the international relations of the country. It mentions the need for cooperation with other countries and the importance of maintaining a peaceful and stable international environment.

5. The fifth part of the document discusses the role of the government in the reform process. It mentions the need for a strong and efficient government and the importance of maintaining the rule of law.

6. The sixth part of the document discusses the role of the people in the reform process. It mentions the need for the active participation of the people and the importance of maintaining their rights and interests.

7. The seventh part of the document discusses the role of the media in the reform process. It mentions the need for a free and independent media and the importance of providing accurate and timely information to the public.

8. The eighth part of the document discusses the role of the judiciary in the reform process. It mentions the need for an independent and impartial judiciary and the importance of maintaining the rule of law.

9. The ninth part of the document discusses the role of the military in the reform process. It mentions the need for a strong and professional military and the importance of maintaining national security.

10. The tenth part of the document discusses the role of the foreign aid in the reform process. It mentions the need for international cooperation and the importance of maintaining the sovereignty of the country.

- Unresolved Item (250, 251/86-09-02), Verify that Surveillance Tests of Electric Fire Pump Were Performed Within The Time Specified by the Technical Specifications Between September 1 and December 31, 1985 - paragraph 5.c.
- Violation (250, 251/86-09-03), Excessive Time Between Required Technical Specification Surveillance Tests on the Fire Protection Systems - paragraph 5.c.
- Violation (250, 251/86-09-04), Failure to Conduct An Independent Fire Protection and Loss Prevention Inspection and Audit for 1985 - paragraph 5.d.
- Violation (250, 251/86-09-05), Excessive Time Between Shift Fire Brigade Drills - paragraph 5.e.(2).
- Inspector Followup Item (250, 251/86-09-06), Verification that Fire Retardant Cable Coatings Have Been Applied to All Required Cables - paragraph 5.f.
- Inspector Followup Item (250, 251/86-09-07), Pre-Fire Plans are not Controlled by an Implementation Procedure, paragraph 5.a.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

- a. (Closed) Violation (250, 251/83-27-01), Failure to Implement Fire Protection Procedures for Welding and Cutting Operations. The licensee's response to this item of October 4, 1983, indicates that construction personnel have been indoctrinated concerning the appropriate fire prevention procedures to be followed within the plant during hot work operations such as welding and cutting. Also, Procedure ASP-17, Fire Prevention, has been revised to conform to the fire prevention and operational requirements of Administrative Procedure 0190.67, Welding and Cutting Safety. No procedure violations were identified during this inspection. This item is closed.
- b. (Closed) Violation (250, 251/83-27-02), Procedure Deviation Approval Not Obtained Prior to Implementing a Change to the Construction Fire Prevention Procedure. The licensee's response to this item of October 4, 1983, indicated that a temporary deviation was issued to Procedure ASP-17, Fire Prevention, to reflect the "Hot Work" permit that was being used by construction. Also, Procedure ASP-2, Preparation of Site Procedures/Process Sheets, was revised to clarify the requirements on temporary deviations and to establish a program to insure that temporary deviations are properly reviewed. The inspector verified that Procedure ASP-2 had been revised to accomplish these concerns. This item is closed.

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- c. (Closed) Unresolved Item (250, 251/81-11-05), Inadequate Fire Rated Enclosure for Chemistry Laboratory. The doors in the fire barrier separating the laboratory from the auxiliary building have been replaced with three hour fire doors. Also, other penetrations through these barriers are being protected or sealed during the Appendix R fire protection modifications currently in progress. This item is closed.
- d. (Closed) Deviation (250/80-19-02 and 251/80-20-02), The fire protection and prevention procedures have been revised and now meet the guidelines of the NRC and the requirements of 10 CFR 50 Appendix R, Section III. This item is closed.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve a violation or deviation. A new unresolved item identified during this inspection is discussed in paragraph 5.c.

5. Fire Protection Prevention Program (64704)

a. Fire Prevention/Administrative Control Procedures

The inspector reviewed the following Fire Prevention/Administrative Procedures:

<u>Procedure No.</u>	<u>Title</u>
AP 15500	Fire Protection Program (4-3-85)
AP 0103.11	Housekeeping (11-22-85)
AP 0190.67	Welding, Cutting, Grinding and Open Flame Work Safety Precautions (10-3-84)
EP 20107	Fire/Explosion Emergencies (3-27-85)
Letter 1-14-82	Plant Manager Policy Letter on "No Smoking"
N/A	Nuclear Plant Engineers Work Package Format Guide (11-14-85), JPE - Form 37
QP 2.12	FP&L QA Program Applicability for Fire Protection Systems (Rev. 2)
N/A	Pre-Fire Plans

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Based on this review, it appears that the above procedures meet the NRC Guidelines of:

The document entitled "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls and Quality Assurance" dated June 1977; and

10 CFR 50 Appendix R - Fire Protection Programs for Nuclear Power Facilities.

Presently, the Pre-Fire Plans are not controlled by an approved implementation procedure. The licensee stated that this was to be corrected in the near future. This concern is identified as Inspector Followup Item (250, 251/86-09-07), Pre-Fire Plans are not controlled by an Implementation Procedure, and will be reviewed during a subsequent NRC inspection.

b. Fire Protection Surveillance Procedures

The inspector reviewed the following Fire Protection System Surveillance Procedures to determine if the various test outlines and inspection instructions adequately implement the surveillance requirements of the plant's Fire Protection Technical Specifications (TS). In addition, these procedures were reviewed to determine if the inspection and test instructions followed general industry fire protection practices, NRC fire protection program guidelines and the guidelines of the National Fire Protection Association (NFPA) Fire Codes. Based on this review, it appears that the above procedures are satisfactory except as noted.

- OP 15524, Fire Protection Pumps and Power Supplies (Revision 12)

This procedure contained both the weekly surveillance of the diesel driven fire pumps and the monthly surveillance of the electric driven fire pump. However, this procedure is to be replaced by two separate procedures, OSP-016.1 for electric driven pump and OSP-016.2 for the diesel driven fire pump which should assure that the appropriate surveillance for the pumps is accomplished.

- MP 15537.1 Fire and Smoke Detector System Semi-Annual Test (6-21-85)

This procedure includes all of the fire detectors for the plant, both those accessible which require a semi-annual surveillance and those not accessible which require surveillance each 18 months. The inspector suggested that this procedure be divided into a number of procedures such that each procedure could be completed within a relatively short period of time. This would help assure that the required surveillance would be performed for all detectors within the time required by the TS.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities.

2. It is essential to ensure that all data is entered correctly and consistently to avoid any discrepancies or errors.

3. Regular audits and reviews should be conducted to verify the accuracy and integrity of the information.

4. The document also outlines the procedures for handling and storing sensitive information, ensuring that it is protected from unauthorized access.

5. Finally, it emphasizes the need for ongoing training and education for all personnel involved in the process.

6. The following section provides a detailed overview of the various systems and tools used to support these operations.

7. Each system is described in terms of its capabilities, limitations, and the specific tasks it is designed to perform.

8. The document also includes a list of key personnel responsible for the management and maintenance of these systems.

9. This information is provided to ensure that all stakeholders are aware of the current state of the organization's IT infrastructure.

10. The final section of the document contains a summary of the findings and recommendations for future improvements.

Presently, there is no procedure to periodically test the sensitivity of the detectors as required by the current edition of National Fire Protection Association Standard 72E, Automatic Fire Detectors, Section 8-3.3.1. Although the licensee is not committed to meet the requirements of this code edition, the inspector suggested that a detector sensitivity program be considered to assure operability of the smoke detector systems. This is identified as Inspector Followup Item (250, 251/86-09-01), Implementation of a Smoke Detector Sensitivity Test Program.

- MP15537.2 Fire Protection Equipment - Annual Maintenance (8-16-85)

This procedure includes both TS required surveillance inspections and maintenance on features and equipment that need to be included in an inspection program but are not required by the TS. The hose lengths specified for a number of fire hose stations in this procedure do not conform to the hose lengths specified by procedures MP15537.5. The licensee is to determine the correct hose length required for these hose stations and is to revise these procedures as needed. This will be verified during a subsequent NRC inspection.

- MP15537.5 Fire Protection Equipment - Monthly Maintenance

This procedure covers the same equipment and items as procedure MP15537.2 and is conducted monthly. The above comments for procedure MP15537.2 are also applicable to procedure MP15537.5.

c. Fire Protection System Surveillance Inspections and Tests

The inspector reviewed the following surveillance inspection and test records for the dates indicated. The completed test data was found to be satisfactory with regard to meeting the requirements of the plant's Fire Protection Technical Specifications except as noted:

- OP 15524, Fire Protection Pumps and Power Supplies

The 31 day fire pump operability test data from April 1985 through January 1986, was reviewed to verify that both the electric and diesel driven pumps were tested. Additional random sample test data for the diesel driven pump was reviewed to verify that the pumps were tested for operability each seven days. The surveillance test frequency meets the TS requirements except for the November 1985 surveillance. The data for this test was not available for review to verify that the surveillances were performed within the 39 days (31 plus 25%) specified for the electric pump by the TS. This is identified as Unresolved Item (250, 251/86-09-02), Verify That Surveillance Tests of Electric Fire Pump Were Performed Within The Time Specified By The Technical Specifications Between September 1 and December 31, 1985, and will be reviewed during a subsequent NRC Inspection.

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The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy auditing of the accounts.

In the second section, the author details the various methods used to collect and analyze data. This includes both primary and secondary research techniques. The primary research involves direct observation and interviews, while secondary research involves the use of existing data sources.

The third section focuses on the statistical analysis of the collected data. It describes the use of various statistical tests to determine the significance of the findings. The results of these tests are then used to draw conclusions about the research objectives.

Finally, the document concludes with a summary of the key findings and recommendations. It highlights the areas where further research is needed and provides practical suggestions for improving the current processes.



- MP 15537.1, Fire and Smoke Detector System Semi-Annual Tests

The tests conducted semi-annually from August 1984 to August 1985 were reviewed and found to be satisfactory.

- MP 15537.5, Fire Protection Equipment - Monthly Maintenance

The surveillance and maintenance conducted by this procedure from July 10, 1985 to January 16, 1986, were reviewed and found to be satisfactory, except a surveillance was not performed in September 1985. The time between the August 27 and October 8, 1985, surveillance for the interior fire hose stations was 42 days. This exceeded the maximum time of 39 days (31 days and 25%) which is specified by the TS and is identified as Violation (250, 251/86-09-03), Excessive Time Between Required Technical Specification Surveillance Tests on the Fire Protection System.

d. Fire Protection Audit

The most recent audit reports of the Turkey Point fire protection program were reviewed. These audits were:

- QA Fire Protection Audit QAO-PTN-85-699 of December 12, 1985 - January 8, 1986
- Triennial Fire Protection Inspection and Audit, Turkey Point 3 and 4 July 1984 (Revised September 1985)

These audits identified several fire protection program discrepancies and unresolved items, and recommended several program improvements. The licensee has implemented the appropriate corrective actions on these audit findings.

However, other than the triennial audit of July 1984, the licensee has not conducted an annual independent fire protection and loss prevention inspection and audit by either qualified licensee personnel or outside fire protection firm since December 1983. Based on the guidance provided by NRC Generic Letter 82-21, the triennial audit replaces the annual audit the year it is performed. This results in only an annual audit being required for Turkey Point prior to July 1985. The 1985 audit was a QA audit only and did not include an inspection and audit by independent qualified fire protection personnel. The failure to conduct this audit is identified as Violation (250, 251/86-09-04), Failure to Conduct an Independent Fire Protection and Loss Prevention Inspection and Audit for 1985.

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e. Fire Brigade

(1) Organization

The fire brigade is composed of approximately 104 personnel from the operations staff. The brigade leader is normally the shift nuclear watch engineer and the remaining fire brigade members are composed of two nuclear operators, one radiation protection technician, and one nuclear lab technician.

The inspector reviewed the "On Shift Duty Roster" for the following dates and verified that sufficient qualified fire brigade personnel were on duty to meet the provisions of Technical Specification 6.2: January 1, 2, 6 and 22; February 4, 5, 8 and 17.

In addition, the inspector verified that sufficient personnel were assigned to each shift on the above dates to meet both the operational and the fire brigade requirements of the plant's Technical Specifications.

However, the NRC Resident Inspector in Report No. 250, 251/85-37 previously identified a concern with the nuclear watch engineer being assigned to the fire brigade since, at times, he is the only Senior Reactor Operator (SRO) within the control room. In the event of a fire, the watch engineer must remain in the control room to meet other NRC requirements until relieved by the other shift SRO. This problem is being addressed by NRC Region II management

(2) Training

The inspector reviewed the training and drill records for four brigade leaders and ten brigade members for 1985. The records reviewed indicated that each of these leaders and members had received an annual medical review, attended the required training, and participated in the required number of drills. The inspector reviewed the shift fire brigade drills conducted for each operating shift in 1985 and noted that the time between eight of the 19 drills exceeded the maximum time of three months between drills permitted by licensee's procedure AP15500, Section 8.1.3 and 10 CFR 50 Appendix R, Section III.I.3.b. This is identified as Violation (250, 251/86-09-05), Excessive Time Between Shift Fire Brigade Drills.

Otherwise, the fire brigade training records inspected were found satisfactory.

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(3) Fire Brigade Equipment

The inspector performed an inspection of the fire brigade equipment, consisting of fire hose, nozzles, tools and miscellaneous equipment stored at the fire brigade equipment storage lockers and building located in the turbine and auxiliary buildings and in the yard area, west of the Nuclear Maintenance Building.

A total of 21 sets of turnout gear (coats, boots, helmets etc.), ten sets of self-contained breathing apparatus and six spare air cylinders are stored at these locations. Ten spare cylinders were being hydrostatically tested during this inspection, but additional units were available from the health physics section.

Based on this inspection, the designated fire brigade equipment appeared to be properly maintained and stored in a ready condition.

(4) Fire Brigade Drill

During this inspection, the inspector witnessed an announced fire brigade drill. The drill fire scenario was a fire involving the Unit 3 C Bus transformer.

Five fire brigade members responded to the pending fire emergency. The brigade assembled adjacent to the transformer in full protective firefighting turnout clothing and self-contained breathing apparatus. An initial size-up of the fire condition was made by the fire brigade leader and one, 1½-inch fire attack hose line and one foam apparatus with 1½-inch hose lines were advanced to the fire area. The fire attack hose lines were placed in service on the fire and the fire was placed under control in 12 minutes.

The fire brigade utilized proper manual firefighting methods and reacted to the fire drill scenario in an effective and efficient manner.

f. Plant Tour

A plant tour was made by the inspector. During the plant tour, the following safe shutdown related plant areas and their related fire protection features were inspected: Control room, cable spreading room auxiliary building, component cooling pumps and diesel generator building.

The inspector visually inspected the fire/smoke detection capabilities, the manual firefighting equipment (i.e., portable extinguishers, hose stations, etc.) and the fire barrier walls associated with the above plant areas. Based on the visual inspection, it appears that the fire

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1. The first part of the report deals with the general situation in the country. It is noted that the economy is in a state of stagnation and that the government is unable to meet its obligations. The report also mentions that the population is suffering from a severe shortage of food and that the government is unable to provide for their basic needs.

2. The second part of the report deals with the political situation. It is noted that the government is unable to carry out its policies and that the country is in a state of political instability. The report also mentions that the government is unable to provide for the basic needs of the population and that the country is in a state of economic stagnation.

3. The third part of the report deals with the social situation. It is noted that the population is suffering from a severe shortage of food and that the government is unable to provide for their basic needs. The report also mentions that the government is unable to carry out its policies and that the country is in a state of political instability.

4. The fourth part of the report deals with the economic situation. It is noted that the economy is in a state of stagnation and that the government is unable to meet its obligations. The report also mentions that the population is suffering from a severe shortage of food and that the government is unable to provide for their basic needs.

5. The fifth part of the report deals with the international situation. It is noted that the country is in a state of political instability and that the government is unable to carry out its policies. The report also mentions that the population is suffering from a severe shortage of food and that the government is unable to provide for their basic needs.

6. The sixth part of the report deals with the future of the country. It is noted that the country is in a state of political instability and that the government is unable to carry out its policies. The report also mentions that the population is suffering from a severe shortage of food and that the government is unable to provide for their basic needs.

7. The seventh part of the report deals with the conclusion. It is noted that the country is in a state of political instability and that the government is unable to carry out its policies. The report also mentions that the population is suffering from a severe shortage of food and that the government is unable to provide for their basic needs.

protection features associated with the above plant areas were properly maintained and fully functional. The automatic fire suppression systems for these areas are to be inspected in detail during a subsequent NRC inspection.

The plant tour also verified the licensee's implementation of the fire prevention administrative procedures. The control of combustibles and flammable materials, liquids and gases and the general housekeeping was found to be satisfactory in the areas inspected considering that Unit 4 is in an outage and major modifications work was in process.

In a number of plant areas, cables were noted not coated with a flame retardant cable coating ("Flamemaster") or the coatings had been removed from portions of the cables to accomplish other work such as the provision of cable penetration seals at fire barrier wall/floor penetrations. The licensee stated that FP&L Report JPE-L-83-09, Safety Evaluation of Flame Retardant Cable Coatings at Turkey Point and St. Lucie, identified the revised requirements for cable coating.

In general, only non-IEEE 383 qualified cables in the areas of high cable concentrations are to be coated with the fire retardant cable coating. All required cable coating is to be applied by the Spring of 1987. This item will be verified during a subsequent NRC inspection and is identified as Inspector Followup Item (250, 251/86-09-06), Verification that Fire Retardant Cable Coatings Have Been Applied to All Required Cables.

Within the areas inspected, no violations or deviations were identified.

