



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

Report Nos.: 50-250/84-33 and 50-251/84-34

Licensee: Florida Power and Light Company  
 9250 West Flagler Street  
 Miami, FL 33101

Docket Nos.: 50-250 and 50-251

License Nos.: DPR-31 and DPR-41

Facility Name: Turkey Point 3 and 4

Inspection Conducted: October 22-26, 1984

Inspectors:	<u>L. E. Foster</u>	<u>11/29/84</u>
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	A. B. Ruff	Date Signed
	<u>L. E. Foster for</u>	<u>11/29/84</u>
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	Division of Reactor Safety	

SUMMARY

Scope: This special, announced inspection involved 130 inspector-hours on site concerning licensee response to Generic Letter 83-28, Required Actions Based on Generic Implications of Salem ATWS Events. Areas inspected included post trip review, equipment classification, vendor interface, post maintenance testing, and reactor trip system reliability.

Results: Of the five areas inspected, no violations or deviations were identified in four areas; one violation was found in one area - Maintenance of Reactor Trip Records, paragraph 7.)

## REPORT DETAILS

### 1. Licensee Employees Contacted

- \*K. Harris, Site Vice President
- C. Baker, Plant Manager-Nuclear
- \*D. Grandage, Plant Manager Acting-Nuclear
- V. Abrishami, Assistant Performance Supervisor
- \*J. Arias, Jr., Regulation & Compliance Section, Supervisor
- M. Costa, Instrumentation and Control (I&C), Supervisor
- \*M. Crisler, QC Supervisor
- J. Crockfort, Operations Enhancement Coordinator
- \*R. Croom, QA Engineer
- R. Farach, QA Engineer
- T. Finn, Operations Supervisor, Nuclear
- B. Gordetzer, Supervisor Electrical QC
- R. Hart, Regulation & Compliance Section, Engr.
- \*E. Hayes, Instrumentation and Control (I&C) Supervisor
- \*K. Jones, QA Superintendent
- C. Keley, Training Maintenance
- C. Lenhart, Reactor Engineer
- \*B. Miller, Training Supervisor
- W. Moorman, Safety Engineering Group
- B. Reinhardt, Acting QC Supervisor
- G. Riveron, I&C Planner
- H. Schneider, Electrical Planning Supervisor
- J. Strong, Electrical Superintendent
- \*E. Suarez, Technical Dept. Supervisor
- \*O. Suero, Electrical Maintenance Supervisor
- \*D. Tomaszewski, Technical Department, Supervisor
- \*W. Williams, Assistant Superintendent, Electrical Maintenance

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

NRC Resident Inspector

\*T. Peebles, Senior Resident Inspector

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on October 26, 1984, with those persons indicated in paragraph 1 above. The licensee was informed of the finding listed below. The licensee acknowledged the inspection findings with no dissenting comments.

Inspector Followup Item (IFI), 250/84-33-01 and 251/84-34-01, Update of FP&L's GL 83-28 Response, paragraph 7.

Violation, 250/84-33-02 and 251/84-34-02, Maintenance of Reactor Trip Records, paragraph 7.

IFI 250/84-33-03 and 251/84-34-03, Review of New Q-List After Issued in Middle of 1985, paragraph 8.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Background

In February 1983, the Salem Nuclear Power Station experienced failures of both Westinghouse type DB-50 reactor trip system (RTS) circuit breakers to open upon receipt of a reactor trip signal. The failures occurred on February 22 and 23, 1983, and were attributed to binding within the under-voltage trip attachment (UVTA) located inside the breaker cubicle. Due to the failure of the circuit breakers at Salem and at other plants, NRC issued Generic Letter (GL) 83-28 Required Action Based on Generic Implications of Salem ATWS Events, dated July 8, 1983. This letter required the licensee to respond on intermediate-term actions to ensure reliability of the RTS. Actions to be performed included development of programs to provide for post trip review, safety-related equipment classification, vendor interface, post maintenance testing, and reactor trip system reliability. This inspection was performed to assess FP&L's conformance with their response dated November 8, 1983, and to review current program improvements relative to improving reliability of safety-related systems and equipment.

6. Documents Reviewed

The following is a list of Turkey Point documents that were reviewed and used by the inspectors for performance of this inspection:

- QP 2.7, Identification of Safety-Related (S/R) Structures, Systems and Components
- QP-4.1, Control of Requisitions and The Issuance of Purchase Orders for Spare Parts, Replacement Items, and Services
- JPE-Q1-2.3A, Classification of Structures, Systems and Components
- Administrative Procedures (AP) No. 103.4, In-Plant Equipment Clearance Orders
- AP-103.15, Operations Experience Feedback
- AP-103.16, Duties and Responsibilities of Shift Technical Advisor

AP-103.40, Nuclear Plant Reliability Data System (NPRDS)

AP-109.1, Preparation, Revision and Approval of Procedures

AP-109.3, On the Spot Changes to Procedures

AP-190.13, Corrective Action for Conditions Adverse to Quality

AP-190.14, Document Control and Quality Assurance Records

AP-190.19, Control of Maintenance on Nuclear Safety-Related and Fire Protection Systems

AP-190.28, Mechanical Test Control, (Post Maintenance)

AP-190.70, Inspection of Maintenance Activities on Nuclear Safety-Related and Fire Protection Equipment

AP-190.72, Receipt Inspection, Identification, and Control of Nuclear Safety-Related and Fire Protection Parts, Material, and Components

AP-304, Plant Training

Operating Procedure (OP) No. 204.2, Schedule of Periodic Tests, Checks, and Operating Evaluation

OP-208.1, Shutdown Resulting from Reactor Trip or Turbine Trip

OP-1004.2, Reactor Protection System - Periodic Test

Maintenance Procedure (MP) No. 707.10, Reactor Trip and Reactor Trip Bypass Breakers - Inspection and Maintenance

MP-707-12, Reactor Trip and Reactor Trip Bypass Breakers - Manual Trip Test

#### 7. Post Trip Review

The licensee was requested in GL 83-28 to describe their program, procedures and data collection capability to assure that the causes for unscheduled reactor shutdowns, as well as the response of safety-related equipment, are fully understood prior to plant restart. The licensee's response to GL 83-28 gives a description of the program and procedures pertinent to performing post trip reviews. The inspector reviewed their response, appropriate procedures, and interviewed responsible licensee personnel to assess the adequacy of the licensee's program and data collection capabilities for post trip reviews.

This inspection revealed the following:

The licensee has prepared and revised procedures to define responsibilities, authorities, methods of assessment, training, and equipment needed to perform a timely technical post trip review.

Off-Normal Operating Procedure 0208.1, Shutdown Resulting from Reactor Trip or Turbine Trip, provides a nine page Post Trip Review form (Appendix A). This Post Trip Review form provides a systematic method for determining the causes of reactor trips, evaluating the proper functioning of safety-related equipment, and making the decision that the plant can be safely restarted.

If the cause of a reactor trip is known, acceptably corrected, and any safety considerations are resolved, the unit may be restarted with the concurrence of the Plant Supervisor-Nuclear, the Shift Technical Advisor (STA), Operations Supervisor, and the Plant Manager-Nuclear or his designee. If the cause of the reactor trip is not known or if any safety considerations are not resolved, the STA's signature on the Report of Plant Abnormal Occurrences (Attachment 2 to Administrative Procedure 0103.16) shall be completed prior to restart. Additional investigation and/or support may be necessary including prior Plant Nuclear Safety Committee review, if appropriate.

Several problems with post trip reviews have been documented in NRC inspection reports in 1984. Inspection Report 250/251-84-09 documented three instances of inadequate post trip reviews. Inspection Report 251/84-21 described problems with the plant computer during a Unit 4 trip in June in which the exact cause could not be determined due to the loss of data and inaccuracy of sequence of events information logged by the plant computer. Inspection Reports 251/84-29 and 250/84-29, 251/84-30 documented cases of inadequate post trip review analyses on a September 20 trip of Unit 4.

Corrective action for these findings has included expanding and improving the Post Trip Review Form and providing additional training to personnel performing post trip reviews. The printer associated with the plant computer in the control room was replaced with one that gives more information and has a higher speed printer. A design change is in progress to replace the existing Data General Nova 840 Digital Data Processing System (DDPS) Computer.

The licensee agreed to provide an update to the submittal to Generic Letter 83-28 concerning Section 1.2, Post Trip Review--Data and Information Capability. The current submittal describes the present Data General Nova 840 Central Processor which will shortly be replaced. The update to the submittal should describe the new central processors as well as the addition of the Safety Assessment System (SAS). The SAS includes the Safety Parameter Display System (SPDS) with displays of plant parameters from which the safety status of operation may be determined. This is identified as Inspector Followup Item (IFI) 250/84-33-01 and 251/84-34-01, Update of FP&L's GL 83-28 Response.

The Off-Normal Operating Procedure 0208.1, Shutdown Resulting from Reactor Trip or Turbine Trip, requires completion of Appendix A, Post Trip Review, for each reactor trip. This procedure also specifies that completed copies of the Post Trip Review Report, including all attachments constitute quality control records and shall be maintained in accordance with Administrative Procedure 0190.14, Document Control and Quality Assurance Records. As of October 24, 1984, copies of Post Trip Review reports for the April 24, 1984, Unit 3 trip and reports for reactor trips from June onward had not been received in the Document Control records vault. Taking four to six months to establish a plant record of a reactor trip in the Document Control records vault is excessive. In addition, Administrative Procedure 0103.6, Duties and Responsibilities of the Shift Technical Advisor, requires the STA to immediately assess all reactor trips and transients occurring on his shift and to prepare a report on Attachment 2, STA Report of Plant Abnormal Occurrences. Off-Normal Operating Procedure 0208.1, Shutdown Resulting From Reactor Trip or Turbine Trip, also requires the STA to fill out and sign this report. The STA report is reviewed by the STA Lead Engineer, Operations Support Engineer Supervisor, and the Technical Department Supervisor. Distribution of the completed STA report is made to the senior plant staff and the NRC Resident Inspector. The STA report constitutes a plant operating record and has not been maintained in the plant records vault. The items discussed above constitute a violation of the plant's T.S. 6.10.1 requirement to maintain facility operating records. This was reported to the licensee as Violation 250/84-33-02 and 251/84-34-02, Maintenance of RT Records.

Part 9 of the STA Report of Plant Abnormal Occurrences (Attachment 2 to AP 0103.16) requires comparison of the trip and transient response with expected responses from similar transients. Part 5 of the Post Trip Review report (Appendix A to ONOP 0208.1) requires the identification of systems or equipment with inadequate performance during the transient.

Plant personnel involved with the preparation and review of post trip review documentation receive initial and refresher training in post trip review procedures in accordance with the following Administrative Procedures: AP 0307, STA Training Program; AP 0308, STA Requalification Program; AP 0301, Licensed Operator Requalification Program; and AP 0304, Plant Training. Specific duties of key individuals are specified in AP 0103.2, Responsibilities of Operators and Shift Technicians on Shift and Maintenance of Operating Records, and in AP 0103.16, Duties and Responsibilities of the STA.

Within the areas examined, no violations or deviations were observed except as reported above.

#### 8. Equipment Classification

The licensee's responses states that their Quality Procedure (QP) No. 2.7, Identification of Safety-Related (S/R) and Nuclear Non-Safety-Related QA Required Structures, Systems, Components and Services, describes the FP&L system for identifying the S/R classification. Turkey Point's "Q" List

(JPE-Q1-2.3a) is a system level document which has been generated and maintained in accordance with this QP. The response also stated that a program was underway to increase the specificity of the Q-List. Per discussion, licensee personnel indicated that the new Q-List should be implemented by the middle of 1985.

Discussion with licensee representatives, examination of documents and work packages revealed the following salient attributes and indicated that equipment classification actions were satisfactory:

Procedure JPE-Q1-23A, Classification of Structures, Systems and Components, is the basic system level document used at Turkey Point in the classification of equipment. It assumes that personnel utilizing it are knowledgeable and competent to perform classification for specific work and procurement packages, and where a question or interruption is required Power Plant Engineering will resolve the issue. The licensee recognizes that this listing is not specific or detailed enough. They have issued Project Instruction 1050-030-01 and a contract to a consulting firm to upgrade, update and increase the specificity of the Q-List. This new Q-List should be completed and issued as a working document by the middle of 1985. This is identified as Inspector Followup Item (IFI) 250/84-33-03 and 251/84-34-03, Review of New Q-List After Issuance.

The Plant Work Order (PWO) is the provision for alerting the Maintenance Department that an item is safety related. It is the responsibility of the "planner" to determine if the maintenance involves a safety-related item. The planner determines this through the use of the Q-List. If the work involves a safety-related piece of equipment, procedures require a QC check of the PWO to insure QC's awareness of the safety-related work. QC, about monthly, does a surveillance on the non-safety-related PWOs for any possible oversight on defining of safety-related versus non-safety-related work by the planner. The controlling procedure for identifying the use of the PWO are AP 0190.1, Preparation, Revision, and Approval of Safety Related and Fire Protection Systems and AP 0190.19, Control of Maintenance on Nuclear Safety Related and Fire Protection Systems. AP 0190.19 also provides instructions for responsibilities, record keeping, notifications, procedures, and exceptions for safety-related maintenance activities. In addition to QC's verification of S-R classification, the licensee representatives indicated that S-R classification is verified by the Maintenance Supervisor and Field Supervisor. The licensee stated that the field practices in this area, such as supervisor's verification and the QC surveillance of the planner's safety-related/non-safety-related identification, will be made a part of the Administrative Procedures. This would be accomplished as part of Performance Enhancement Program (PEP) which is underway at Turkey Point.

The corrective action program at Turkey Point 3 & 4 is covered by Administrative Procedure 0190.13, Corrective Action for Conditions Adverse to Quality. This procedure establishes the mechanisms by which conditions adverse to quality are identified and tracked. The procedure covers conditions identified by USNRC Inspectors and licensee's Quality Control inspectors. The items so identified are tracked by the Corrective Action Status Report (CASR). This system is tracked on an IBM PC located in the Quality Control Offices. The format of the report is that it includes a notice number, the basis for the commitment to take corrective measures, the responsible person, a due date, a description, remarks, and a contact person. Sorts are made by the due date to keep those responsible informed of upcoming deadlines.

The indoctrination and training of maintenance personnel is covered by AP 0304, Plant Training. This procedure requires Maintenance Department Training Supervisors to provide programs for personnel under their various disciplines. This training was handled independently by the various departments and consisted of on-the-job training and related technical training consistent with the duties and responsibilities of the individual. Vendors are sometimes contracted to give specific training on their equipment. The licensee representatives stated, as an example in the electrical area, that ITE and Limitorque had provided training on their breakers and valve operators respectively. Maintenance training was centralized in June 1984 under one Plant Training Maintenance Supervisor. The licensee stated that all lesson plans as a result of this reorganization should be in place by the middle of 1985. A training assessment inspection was recently made by Region II at Turkey Point. This inspection is documented in Reports 250/84-25 and 251/84-26.

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

#### 9. Vendor Interface and Manual Control

The licensee's response to GL 83-28 stated that vendor recommendations for modification, maintenance, and testing of safety-related equipment are reviewed by the Turkey Point technical staff and are incorporated into plant instructions and procedures. The response also stated that Florida Power and Light actively participates in industry programs such as INPO administered SEE-IN and NPRDS programs, Westinghouse Owners Group (WOG), and has agreements with Westinghouse (W) for supplying technical information on W supplied equipment and systems. The licensee also stated that the W recommended modifications to the DB-50 Breakers had been accomplished and the WOGs method of inspecting the modification had been used; thus, vendor interfacing concerning the DB-50 Breakers is being accomplished. Information from other vendors supplying safety-related equipment and services are controlled by purchase order agreements and contracts. Recommendations from vendors such as lubrication, housekeeping, cleaning, adjusting, and testing of equipment had been incorporated into Turkey Point Maintenance and Operating Procedures MP 0707.10, MP 0729, OP 1004.2, AP 190.19, and ONOP 0208.1.



The inspector interviewed personnel, examined documentation, and observed on-going activities to determine the adequacy of the licensee's control of vendor interface, vendor technical information, industry information, and vendor manuals.

Based on these interviews, review of documents, and observation of activities, the licensee has established and is implementing programs to assure that vendor information is complete, current, and being used.

ADM 0103.38, Control and Use of Vendor Technical Manuals, dated May 30, 1984, established criteria for the control of vendor manuals. This procedure specifies that plant personnel shall ensure that the technical manuals used for maintenance of nuclear safety-related equipment are the most up-to-date copies by using a controlled copy or confirming through the Document Control Department.

Specific responsibilities for obtaining, controlling, and using vendor manuals have been assigned to plant personnel as follows:

All plant personnel ordering equipment that require vendor manuals shall indicate manuals required on the Requisition on Purchase Agent (RPA).

Plant personnel who receive manuals or revisions to the manuals shall transmit the information to Document Control for processing.

Plant personnel are to notify Document Control of any outdated manuals or discrepancies found during use of vendor manuals.

The Document Control Supervisor will request the Quality Control Supervisor to determine if the manuals are for nuclear safety-related systems and components.

A controlled master copy of each vendor manual for safety-related systems and components shall be kept in Document Control.

Controlled copies of manuals will be distributed to cognizant plant personnel by Document Control.

Document Control is responsible to dispose of excess spare or obsolete manuals.

The procedure also contains a flow chart showing the processing of vendor manuals from initiation of the purchase order to the disposal of obsolete manuals. Personnel interviewed understood the importance of using up-to-date manuals and the controlling process.

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

ADM 0103.15, Operating Experience Feedback, dated August 29, 1984, provides the means to ensure that operating experiences within FP&L and other licensee plants are made available to Turkey Point personnel and other licensees. Instructions for the administration of the program are contained in Nuclear Licensing Procedure QI 2.13A, revision 0. These two procedures cover NRC Information Notices, Generic Letters, Bulletins, Industry Event Reports, Vendor Reports, INPO Reports, and Turkey Point Operating Experience Reports. Responsibilities for event identification, evaluation of events, classification, and dissemination of evaluations to Turkey Point personnel and other utilities are specified to ensure effective evaluation and use of information. The plant licensing group maintains records of events, dispositions, and corrective actions.

Turkey Point personnel participated in the Nuclear Utility Technical Advisory Committee (NUTAC) with 55 other utilities to develop a Vendor Equipment Technical Information Program (VETIP). This program helps ensure that current information and data will be available to plant personnel responsible for developing and maintaining plant procedures and instructions. The Nuclear Plant Reliability Data System (NPRDS) and the Significant Event Evaluation and Information Network (SEE-IN) managed by INPO provides a source of sharing information on systems and components with other utilities. An engineer has been assigned to handle the NPRDS program at Turkey Point. Discussions with licensee personnel revealed that Turkey Point was utilizing NPRDS information to help evaluate component and system problems. Turkey Point also participated in other industry programs such as Westinghouse Owners Group (WOG), W RADAR Responses, INPO Significant Event Report (SER), and Significant Operating Experience Report (SOER) programs. Interviews with personnel and examination of documents revealed that personnel were cognizant of these programs and were using information obtained from these programs to improve the reliability of Turkey Point systems and components.

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

The licensee is a member of the Westinghouse Owners Group (WOG) which is comprised of utilities having W plants. This group evaluates and determines action on technical problems from all members. W keeps the WOG advised of any modifications, repair, or technical maintenance required of components and systems supplied by them under the Nuclear Steam Supply System (NSSS) Contract. The inspector reviewed documentation transmitting Technical Bulletin 83-02, revision 1, Addendum 1, DB-50 Reactor Trip Breaker Maintenance. This technical bulletin and manual was marked as Controlled Copy No. 3 and was received by FP&L on January 10, 1984 from the Westinghouse Nuclear Services Division. This bulletin transmitted the lubrication kits for the UVTAs, plus the maintenance program for the DB-50 Reactor Trip Switchgear. The text of the bulletin requires all recipients at each licensee to submit a self-addressed acknowledgement receipt back to W to assure W that each licensee received the technical bulletins, maintenance programs, and lubrication kits. If receipts are not received by W, the information is retransmitted. Examination of work requests discussed in

paragraph 11 of this report verified that the licensee performed modifications and preventative maintenance activities on the DB-50 Breakers as recommended by Westinghouse. To further ensure that licensees have received all technical bulletins, W periodically transmits a current list of all bulletins to licensees that have their equipment. The licensee stated that their programs for obtaining technical information from vendors is generally adequate and if problems occur, personnel expediting methods are used to obtain information urgently needed.

ADM 0190.4, Procurement Document Control, dated July 18, 1984, provides the methods for the control of procurement documents including requisitions for services, material, and equipment. This procedure specifies the responsibilities of the originator, department heads, quality control, plant manager, plant coordinator, and the power plant stores department. This procedure also specifies how ordering requirements are developed (FSAR, Q-List, original equipment, etc.), identification of procured item, quality classification of equipment, review and approval route of requisitions, bid requests, quality requirements, and release of purchase order. Appendix A and B of this procedure define the Quality Classifications and give more detailed guidance concerning the procurement of Class IE Electrical Equipment, calibration and test equipment, consumables, elastomers, and other equipment or products that could affect safety-related systems or components. Interviews with personnel and examination of procurement documents verified that this procedure was being implemented and procurement documents were being controlled. The following procurement documentation were examined:

Purchase Order (PO) 93099-99107P, Westinghouse Breakers and Trip Devices

PO 93099-59391W, Lubrication Kit No. 693C500G04

PO 93099-99875W, Governor Speed Changer

PO 93099-59379P, Rollers W Style 1514751, Arc Rings and Washers

PO 93099-99372P, Services of W Technical Representative to Perform Inspection of Control Rod Guide Tube Insert

PO 93099-99351P, for 45 Guide Tube Inserts and Tool

PO 93099-59222P, Under Voltage Trip Attachment including Instruction Books

• PO 20275-99890P, Calibration Services from Control Center, Inc.

PO 93099-59551W, Isolators-Signal, Model 110

PO 93099-99691P, Arc Chutes for DB-50 Breakers

Material Release No. 84-3091-1 dated July 24, 1984

Nonconformance Report No. 394-84 dated August 23, 1984

W Certificate of Performance dated August 18, 1984

Request Form for Supplier Technical/Quality Information for Reactor Trip and Bypass Breakers

Controlled Copy of Instruction Book SO 24-Y-5724-I, for Low Voltage Metal-Enclosed Switchgear, Controlled Document No. 315E

PO 71365-27433C, Heat Shrinkable Tubing for Electrical Wiring

PO 2300-59493W, Set Screws for Schutte and Koerting MS ISO and Check Valves

PO 59790-26808C, M-6 Oxiline from J. B. Moore Co.

The above procurement documents included safety-related classifications, documents required with shipment, 10 CFR 50, Part 21 clause, special QA requirements (SQADs), QA program requirements, identification, certified test reports, and other requirements placed on the vendors by the purchaser.

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

Training of site procurement personnel was discussed with the Site Procurement Agent to determine if provisions were provided for indoctrination and training of personnel performing activities impacting plant equipment and services. The inspector was advised that all procurement personnel were required to attend a Purchasing Department Quality Assurance Indoctrination Course within two weeks after employment. Experienced procurement personnel are also required to take the course and to retake the course every 12 months. A review of the course handout showed that the course included a history of Turkey Point, description of the nuclear plant, design codes and standards used in plant design, FP&L QA Manual, NRC Rules and Regulations, purchasing Quality Instructions (QIs), and the Special QA Documents (SQADs) which are applicable to all purchased items or services. Upon completion of the course, each attendee is interviewed by the Procurement Agent and is given a written examination. A review of several purchase orders and other procurement documentation (listed elsewhere in this report) did not result in any adverse findings; therefore, the training given to procurement personnel appeared to be effective.

Within the area examined, no violations or deviations were identified.

#### 10. Post Maintenance Testing

The licensee stated in their response to GL 83-28 that maintenance and post maintenance testing of S/R components is required to be performed by various station administrative documents and that post maintenance testing is covered by Maintenance Procedures (MP), Administrative Procedures (AP), Operating Procedures (OP), etc.

The inspectors reviewed procedures involving maintenance and post maintenance testing activities and observed activities in these areas to ensure that requirements of Generic Letter 83-28 were met and that the licensee's responses were being implemented. Review of procedures, interviews, and observations of activities in this area for the following equipment was performed and is discussed below:

a. Reactor Trip Breaker S/N 24Y5724B-1

This breaker was removed from Unit #3 RT-A location and was relocated in Bypass B position. The performance of the entire preventive maintenance (PM) procedure on a reactor trip breaker (RTB) was observed. This involved watching a journeyman electrician as he performed the steps as outlined in Maintenance Procedure 0707.10. This procedure had an additional procedure attached to it identified as On-The-Spot Changes (OTSC) 2574. The OTSC was necessitated by the recent discovery of deterioration of a roller bearing in the manual closing mechanism. An investigation by Westinghouse is presently being undertaken to identify the cause of the bearing deterioration and to decide what permanent changes, equipment-wise, may be required. A completion date for this bearing investigation was not received.

During the maintenance on the RTB it was pointed out to the inspector by the Support Group Supervisor that there have been several problems appearing on the RTBs in recent PMs. These problems are listed below.

- (1) Cracked Insulating (Operating) Link - The link cracked when adjustments were made on the alignment of the main contacts. The link was replaced.
- (2) Undervoltage Trip Attachment (UVTA) Coil Tape Damage - The coil wiring was exposed because of the damage to the coil tape. The UVTA was still operational, but was replaced.
- (3) Manual Closing Mechanism Bracket, Cracked Welds - Of 4 breakers on Unit 4, three had a cracked weld on the right hand side of the operating mechanism enclosure. Westinghouse has concluded that the cracked welds did not render the breaker inoperable and could not cause a failure which would prevent the opening of the breaker.

These three problems, along with the bearing problem, are detailed in a FP&L inter-office correspondence dated October 8, 1984, to PNSC (Plant Nuclear Safety Committee). The letter identifying number is PTP-EM-17. The licensee stated that this was going to be reported on a voluntary LER #027 and that it would be reported on the Nuclear Plant Reliability Data System as required by AP 103.40. LER-027 was issued by FP&L on 11-1-84.

The inspector noted that the maintenance procedures require a combination of electrical and manual openings and closings of the RTB. The total openings and closings are now over 30 operations. This PM is being performed every 6 months, thus significantly increasing the total number of activations the RTBs will have over a year's time.

The licensee has adequate procedures for the maintenance of these breakers. Maintenance Procedure 0701.10, Reactor Trip and Reactor Trip Bypass Breakers - Inspection and Maintenance, follows the vendor's recommended procedures. The change to this procedure by OTSC 2574 is covered by Administrative Procedure AP 0109.3, On-the-Spot Changes to Procedures. The procedures were followed by the licensee during the performance of the PM on the RTB. The work on the RTB was performed under the control of Plant Work Order (PWO) 4233.

The PWO is the vehicle for initiating, planning, and tracking maintenance items. The PWO for the reactor trip breakers was written for the "3A Reactor Trip and Bypass Breakers" functional locations. However, these breakers were not identified by their serial numbers on the PWO and since these breakers can change functional locations after maintenance, a possible confusion could be created over which breakers are to be maintained and also confusing future record keeping and trending. The licensee states that recording of the unique identification of the breaker and its new functional location, if changed, are adequate for records and trending purposes. They stated that they would re-evaluate their practices to determine if the PWO should also identify the breaker by unique identification rather than by functional location only.

After the maintenance was completed, the RTB was reinstalled and the post-maintenance testing was observed. The post-maintenance test procedures for the reactor trip breaker are included as part of maintenance procedure 0707.10. The procedures were properly followed by the individuals conducting the post-maintenance testing.

Two installed reactor trip breakers in each Unit 3 and 4 were inspected. These breakers were visually inspected for proper gap between the trip tab of the UVTA and the trip bar of the RTB and for any inappropriate or unusual conditions.

b. Other Electrical S/R Items

Two items concerning the relabeling of terminal markings on GE NGV Relays for Unit 3 and 4 were observed. These jobs were implemented by PWO 4252 and 4886. The inspector checked the proper use of plant procedure for this work.

The PWO identified the work as nuclear safety related. By plant procedure this required QC to check the PWO. This was properly done. The acting QC Supervisor was interviewed concerning the surveillance of this work. The supervisor stated that QC inspections are done on a

surveillance bases unless more thorough QC is called for by procedure. In this case the QC Supervisor stated that the Journeyman's Work Report (JWR) would be signed off without an actual QC inspection. The Administrative Procedure which provides the guidelines for these procedural requirements is AP 0190.19.

c. Main Steam Isolation Valve

The maintenance and post maintenance testing of Plant Maintenance Instruction 72-020, MSIV Actuator Removal and Installation, was reviewed. This procedure was being used for work in process on Unit 4 MSIV Actuator. The stroke time of the valve was being modified by changing the solenoid orifices.

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

11. Reactor Trip System (RTS) Reliability and Surveillance Testing of the Diverse Reactor Trip Functions of the RTS.

This inspection was performed to examine Turkey Point's proposed modification for automatic actuation of shunt trip attachment and to verify that the diverse trip features are tested independently as part of their PM or surveillance testing programs.

The licensee in his response of July 16, 1984, concerning reactor trip system reliability (automatic actuation of shunt trip attachment) stated that this modification would be implemented on the first refueling outage starting four months after issuance of the Turkey Point Safety Evaluation Report (SER) for this item. This modification is based on the Westinghouse Owners Group (WOG) design change.

The WOG design adds a relay in the Reactor Protection System (RPS) logic train. This relay is energized from the RPS Logic Train Voltage to the UV Trip Coil. When the voltage is removed by an automatic reactor trip (RT) signal the relay will be deenergized and its "b" contact will close in a circuit that energize the shunt trip coil of the breaker. This change insures that the mechanical linkages of both the UV and shunt trip devices of the breaker will be actuated.

Presently, Turkey Point has a manual shunt trip as shown on Turkey Point Reactor Protection System Drawing 5610-M-430-146. In series with the shunt trip coil is a red light circuit. During normal operations with the reactor trip breaker (RTB) closed, the red light is lighted. The current in this series configuration is not large enough to actuate the shunt trip coil armature. The red light being lighted indicates circuit continuity, power availability to the shunt trip coil, and indicates that the RTB is closed. On a manual trip, the red light circuitry is bypassed so that full circuit voltage is across the shunt trip coil. The shunt trip coil armature is activated which should open the breaker. This same manual trip opens the undervoltage trip attachment (UVTA) circuit which should also open the breaker.

The diverse trip features (UVT and Shunt Trip) are bench tested independently every 6 months as part of the preventive maintenance (PM) program. This test was performed and observed on RTB Serial No. (S/N) 2445724b-1 as part of this inspection. Maintenance Procedure (MP) 0707.10, Reactor Trip and Reactor Trip Bypass Breakers - Inspection and Maintenance, was used in this test. This MP was initiated by PWO 4233. The test was performed satisfactorily.

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