



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

Report Nos.: 50-250/86-39 and 50-251/86-39

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: September 9 - October 16, 1986

Inspectors:	<u><i>H. O. Christensen for</i></u>	<u>NOV 18, 1986</u>
	D. R. Brewer, Senior Resident Inspector	Date Signed
	<u><i>H. O. Christensen for</i></u>	<u>11/18/86</u>
	K. W. Van Dyne, Resident Inspector	Date Signed
	<u><i>H. O. Christensen for</i></u>	<u>11/18/86</u>
	J. B. Macdonald, Resident Inspector	Date Signed
	<u><i>H. O. Christensen</i></u>	<u>11/18/86</u>
	H. O. Christensen, Project Engineer	Date Signed
Approved by:	<u><i>H. O. Christensen for</i></u>	<u>11/18/86</u>
	Stephen A. Elrod, Section Chief	Date Signed
	Division of Reactor Projects	

SUMMARY

Scope: This routine, unannounced inspection entailed direct inspection at the site, including backshift inspection, in the areas of licensee action on previous inspection findings, annual and monthly surveillance, maintenance observations and reviews, operational safety, independent inspection, and plant events.

Results: Violations - Failure to meet the requirements of Technical Specification (TS) 6.8.1, two examples, in that adequate procedures were not established (paragraphs 10 and 11); failure to meet the requirements of 10 CFR 50, Appendix B, Criterion XVI, two examples, (paragraphs 7 and 9); and failure to meet the requirements of TS 6.8.1, two examples, in that otherwise adequate procedures were not properly implemented (paragraph 9).

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

C. M. Wethy, Vice President - Turkey Point
C. J. Baker, Plant Manager-Nuclear - Turkey Point
F. H. Southworth, Senior Technical Advisor
E. Preast, Site Engineering Manager (SEM)
*D. D. Grandage, Operations Superintendent and Acting Plant Manager
*T. A. Finn, Operations Supervisor
J. Crockford, Operations Enhancement Coordinator
J. Webb, Operations - Maintenance Coordinator
*J. W. Kappes, Maintenance Superintendent - Nuclear
R. A. Longtemps, Mechanical Maintenance Department Supervisor
D. Tomaszewski, Instrument and Control (IC) Department Supervisor
J. C. Strong, Electrical Department Supervisor
*W. Bladow, Quality Assurance (QA) Superintendent
*M. J. Crisler, Quality Control (QC) Supervisor
J. A. Labarraque, Technical Department Supervisor
R. G. Mende, Reactor Engineering Supervisor
*J. Arias, Regulation and Compliance Supervisor
R. Hart, Regulation and Compliance Engineer
W. C. Miller, Training Supervisor
P. W. Hughes, Health Physics Supervisor
*G. Solomon, Regulation and Compliance Engineer
*J. Donis, Engineering Department Supervisor
*R. W. Kemmer, Fire Protection Supervisor
*J. J. Zudans, Nuclear Engineering, Human Factors Performance
*D. W. Haase, Safety Engineering Group (SEG) Chairman
*M. J. Powell, Training Department
*B. A. Abrishami, System Performance Supervisor

Other licensee employees contacted included construction craftsmen, engineers, technicians, operators, mechanics, electricians and security force members.

*Attended exit interview on October 8, 1986.

2. Exit Interview

The inspection scope and findings were summarized during management interviews held throughout the reporting period with the Plant Manager-Nuclear and selected members of his staff. An exit meeting was conducted on October 8, 1986. The areas requiring management attention were reviewed. On October 16, 1986, a meeting was held with the Plant Manager-Nuclear to discuss inspection findings through the end of the reporting period.

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Three violations were identified:

Failure to meet the requirements of Technical Specification (TS) 6.8.1, two examples, in that Temporary Operating Procedure (TOP) 233 was not adequate for the purpose of testing power mismatch and turbine runback modifications (paragraph 10) and no adequate procedure existed specifying approved methods to control fire doors (paragraph 11) (250, 251/86-39-01).

Failure to meet the requirements of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, two examples: in that, (1) corrective action for multiple missed TS required surveillances in 1985 did not preclude the occurrence of multiple missed TS required surveillances in 1986 (paragraph 7); and (2) on three separate occasions between September 1985 and September 1986, Administrative Procedure (AP) 0103.36 was found to be improperly implemented. Corrective action subsequent to the first and second occasions did not prevent a third instance of inadequate implementation (paragraph 9) (250, 251/86-39-02).

Failure to meet the requirements of TS 6.8.1, two examples, in that procedures AP 0103.2 and 4-OP-065.2 were not properly implemented (paragraph 9) (250, 251/86-39-03).

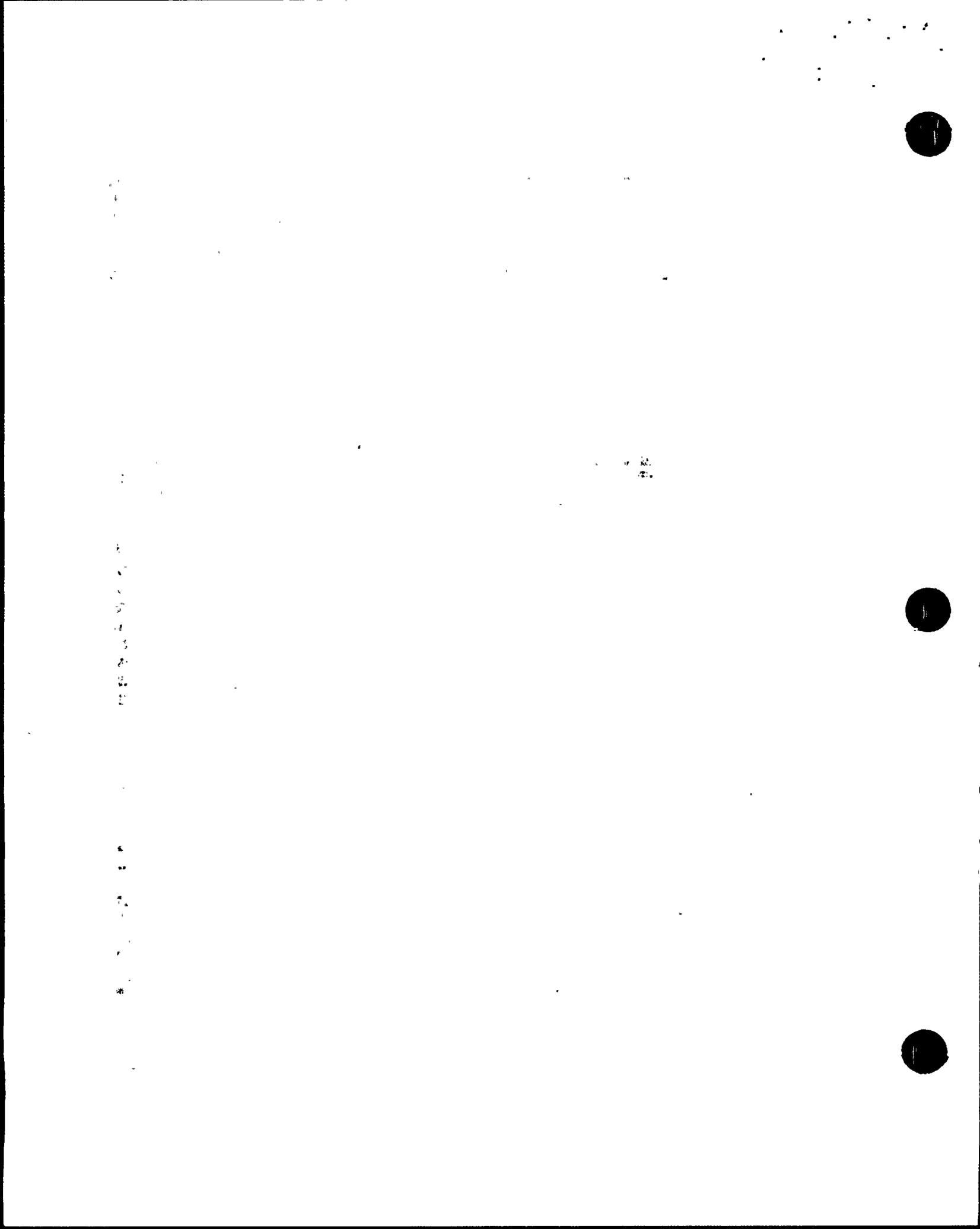
Three Unresolved Items (URI) were identified:

Evaluate the adequacy and timeliness of the licensee's small bore piping verification and corrective action program with respect to recently identified deficiencies in the emergency diesel generator and component cooling water systems (paragraph 9) (250, 251/86-39-04).

Evaluate the licensee's compliance with the schedular requirements of 10 CFR 50.48(c) with respect to completion of fire protection modifications, in that Unit 4 raceway modifications and common (Units 3 and 4) penetration seal modifications were not completed when required (paragraph 11) (250, 251/86-39-05).

Evaluate the licensee's compliance with the requirements of 10 CFR 50.49 (environmental qualification) for Limitorque motor operators between November 1985 and August 1986 (paragraph 14) (250, 251/86-39-06).

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection. The licensee acknowledged the findings without dissenting comments except that the licensee felt that posted roving fire watches provided adequate compensation for propped open fire doors (violation 250, 251/86-39-01). The inspectors acknowledged that the Commission had previously approved the roving fire watch program as a substitute for degraded fire barriers during 10 CFR 50, Appendix R modifications. However, the intent of the roving watch program was to compensate for fire barriers, including doors, which were unavoidably



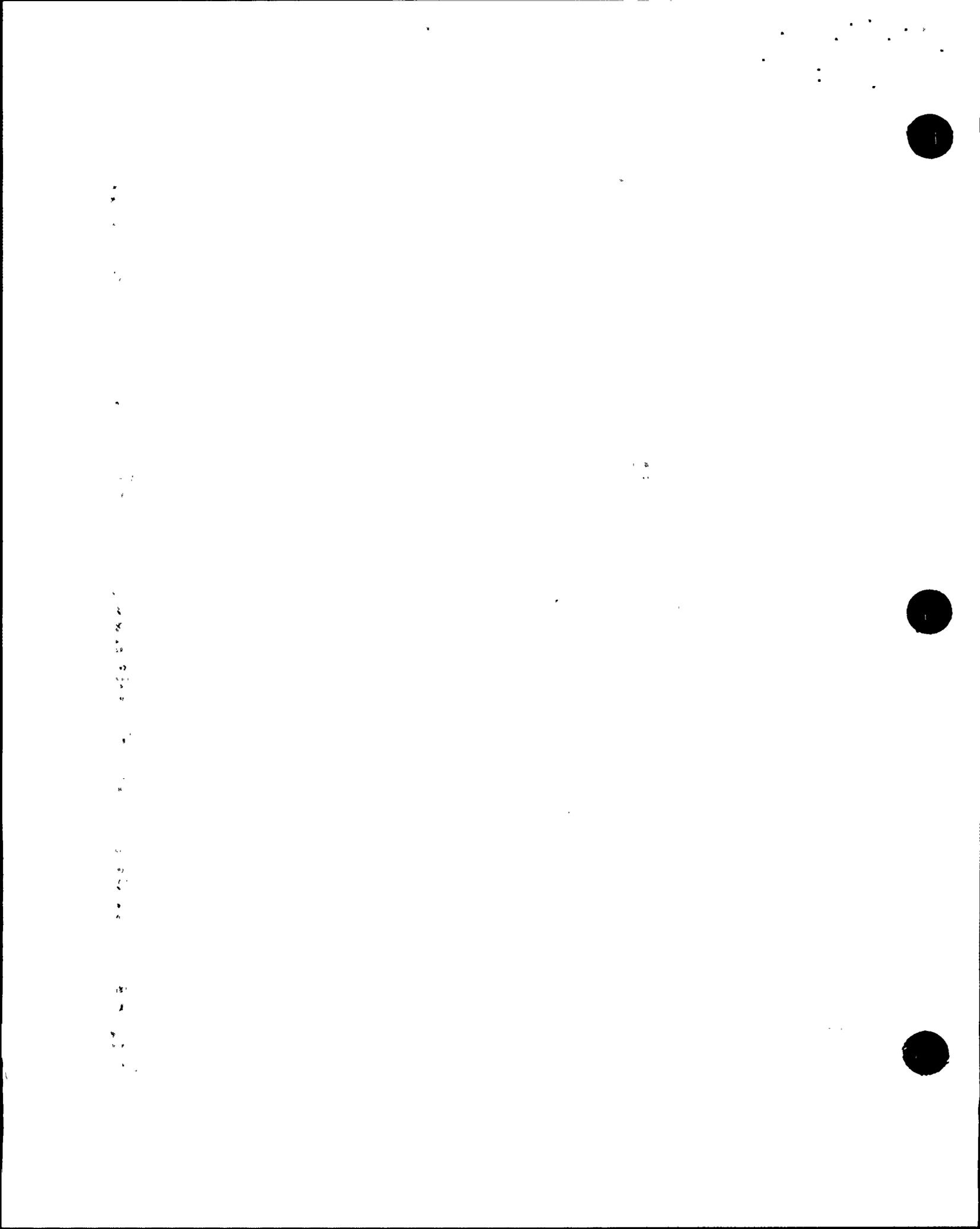
unavoidably out of service. The Commission expected fully operable fire doors to be kept closed unless required to be open to support maintenance or Appendix R modifications. The examples of degraded fire doors sited in this report all refer to fully operable fire doors which had been rendered inoperable when the doors were unnecessarily and arbitrarily propped open due to the absence of administrative control procedures and the resultant diminished personnel awareness.

The inspectors reviewed the Institute of Nuclear Power Operations (INPO) report subsequent to the June 1986 INPO site evaluation of the Turkey Point Plant.

3. Licensee Action on Previous Inspection Findings (92702)

(Closed) Licensee Event Report (LER) 250/85-15, Technical Specification - Reactor Vessel O-Ring Leakage. On June 25, 1985, the Unit 3 reactor vessel head O-Ring was determined to be leaking at approximately 2 to 3 gallons per minute. A Unit 3 cooldown was performed to allow a full determination of the cause of the failure. An interdepartmental task team was formed to identify corrective actions. The reactor head was removed on July 1, 1985, to facilitate visual examination of the O-Rings. Three preliminary findings were identified and are documented in the LER. On January 13, 1986, the licensee completed a final evaluation of the event (L. F. Pabst memorandum to C. O. Woody). The root cause of the leakage was that the vessel sealing surfaces were open to contamination from outside the vessel during the time period between setting the reactor head and tensioning the studs. Water used in cavity decontamination activities following the setting of the head appeared to have caused small particles of sediment to accumulate on the sealing surfaces. Cavity decontamination efforts were exceptional due to the completion of the Unit 3 split pin changeout. It is believed that the split pin replacement project, which entailed extensive underwater cutting, resulted in unusually high surface contamination levels in the upper refueling cavity. This necessitated repeated washdowns to produce the desired level of decontamination. The licensee determined that the O-Ring design was such that the O-Ring does not touch the ring groove in the vessel flange until after the studs are partially tensioned. This increases the likelihood that particulate contamination can lodge between the O-Ring and the flange groove, precluding a good seal.

The presence of particulate matter pressed between the O-Rings and the vessel flange grooves resulted in a total of 77 leak paths between the inner and outer O-Rings. Both O-Rings were effected and this resulted in the observed primary leakage. The O-Rings did not fail materially. However, once the head was tensioned, the particulates, which were primarily iron, nickel and chromium, were compressed and formed a coating that was, in some areas, 5 mils thick.



Since the licensee was unaware that the O-Rings were, by design, not firmly seated in the flange groove until after the first stud tensioning sequence, precautions were not in place to preclude the contamination from entering the flange grooves. The licensee has developed specific precautions to prevent recurrence of this problem. Those efforts were fully successful during the subsequent Unit 4 refueling outage, in that contaminants were prevented from entering the area between the flange groove and the O-Rings subsequent to the Unit 4 slit pin replacement of March 1986. The Unit 4 reactor head was reassembled and the reactor returned to service in August 1986 and no O-Ring leakage occurred.

(Closed) LER 251/84-026, Engineered Safety Feature Actuation - Auxiliary Feedwater (AFW) Initiation. On November 24, 1984, Unit 4 was proceeding to cold shutdown due to problems with the "4A" 4KV bus when an alarm for actual high level in the "B" steam generator (S/G) caused the "B" S/G feedwater pump to trip. The high S/G level was caused by personnel error in not maintaining an adequate S/G level. When the "B" S/G feedwater pump tripped, this completed the S/G protection logic for two S/G feedwater pumps tripped ('A' pump tripped due to "4A" 4KV bus problems) and AFW System automatically started. All equipment functional as designed.

(Closed) LER 250/84-030, TS Surveillance - Fire Pumps. On November 29, 1984, the surveillance extension period allowed by TS 4.15.2.a.6 expired, when functional testing of the motor driven and diesel drive fire pumps could not be completed in a timely manner. To ensure that these surveillances are completed on time the licensee completed the following corrective actions: Operating Procedure (OP)-15524, Fire Protection Pumps and Power Supplies - Periodic Tests, was revised to clarify the testing requirements for the motor driven fire pump. OP-0204.2, Schedule of Periodic Tests, Checks and Operating Evolutions, was revised to assure that the Plant Supervisor-Nuclear is aware of testing status of the motor driven fire pump. Operations Surveillance Procedure (O-OSP-200.1), Schedule of Plant Checks and Surveillances, was written and implemented to centralize the responsibility for scheduling the performance of all T.S. surveillances with the Operations Department.

(Closed) LER 250/85-002. On January 13, 1985, containment boundary valve CV-3-6275C, "C" S/G blowdown isolation, would not close when given a close signal from the control room. The cause was a clogged air filter on the valve actuator solenoids that prevented the valve from functioning. The licensee has written Plant Maintenance Instruction 74-042 (Unit 3) and 74-043 (Unit 4) which requires quarterly cleaning and inspections of valves that have this air filter arrangements.

(Closed) LER 251/85-004, Reactor Protection System Actuation - Reactor Trip. On February 7, 1985, with Units 3 and 4 operating at 100% power, a high voltage flashover occurred on an insulating support of a Unit 3 240 KV circuit switcher. The ground fault protective relay tripped two switchyard 240 KV breakers and the normal power supply breaker to the Unit 4 "C" bus. The loss of the four "C" bus caused a trip of the four "B" S/G feedwater pump. The reduced feedwater flow transient initiated a Unit 4 reactor trip

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as a result of the Reactor Protection System coincident logic of "Steam Flow/Greater Than Feedwater Flow" combined with "low 'A' S/G level." The root cause of the voltage flashover was the buildup of dirt and salt deposits on a circuit switcher insulating support. The following corrective actions were taken: Unit 3 startup and "C" transformer bushings were cleaned, additionally the transformer were meggered and the turn ratios tested. The licensee has a routine program for inspecting and cleaning the ceramic bushings for the circuit switches.

(Closed) LER 250/85-005. On February 5, 1985, while performing a work order to clean the four batteries for the diesel driven fire protection pump, it was noticed that battery acid fluid had been forced out of each of the four batteries. Investigation revealed that the diesel charging system had failed which resulted in overcharging the batteries. The charging system failure was caused by a failed diode bridge rectifier. The following corrective actions were taken; new batteries and a diode bridge rectifier were replaced and tested. A new circuit card was installed in the standby charger controls.

(Closed) LER 251/85-008. On April 11, 1985, a small leak was discovered on a test connection between containment and containment isolation valve, CV-4-956A, located on the pressurizer steam space sampling line of Unit 4. The licensee performed the following corrective actions:

- a. Repaired the test connection leakage.
- b. Adjusted the upper limit switch on valve CV-4-951 for closed indication.

(Closed) LER 251/85-010. On May 15, 1985, a Unit 4, turbine trip and a subsequent reactor trip occurred due to the inadvertent actuation of an Engineered Safety Features (ESF) relay. The actuation was caused by a construction worker bumping the ESF relay while performing Appendix R modifications inside an engineering safeguards cabinet. The licensee cautioned construction personnel on the care necessary and consequences of improper work practices, when working in such cabinets.

(Closed) LER 250/85-009 and 250/85-011, Technical Specification - Snubbers. The as-found condition of the snubbers were not adequately evaluated as required by T.S. The licensee has completed the following corrective actions: Construction Procedures, ASP-6, Welding Control, and ASP-8, Corrective Actions, were revised to ensure that no snubber will be removed without the visual examination and/or TS evaluation being completed as required. Additionally, AP-0190.83, Mechanical Shock Arrestor Surveillance Program; AP-019.85, Functional Testing of Mechanical Shock Arrestors; and OP-0209.9, Visual Examination of Mechanical Shock Arrestors were revised to enhance the testing and visual examination of snubbers.

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(Closed) LER 251/85-011, ESF Actuation - Reactor Trip. A Unit 4 reactor trip occurred on May 17, 1985, when off site power was lost due to multiple faults on the Florida Power and Light (FPL) high voltage power system. The unit was returned to service late the same day. No further corrective action was required.

(Closed) LER 250/85-13, ESF Actuation - Emergency Diesel Generator (EDG) Automatic Start. The cause of the event was an incorrect step in procedure 3-OP-005, 4160 volt buses A and B, used to de-energize the 3A 4160 volt bus. The procedure was changed to prevent reoccurrence of the event.

(Closed) LER 251/85-016. On June 18, 1985, TS 3.7 requirements were exceeded when the 4A motor control center failed its functional testing; thus causing the "B" EDG to be declared out of service. The cause was found to be an out of adjustment breaker trip latch on tie breaker 40535, which is associated with the 4A 480 volt AC motor control center. The defective breaker was removed and an equivalent spare breaker was placed back into service. No further corrective action was required.

(Closed) LER 250/85-019, Reactor Protection System Actuation - Reactor Trip and AFW Initiation was caused by a lightning strike. A post trip review was conducted and no abnormal operating conditions or indications associated with the trip were identified. A similar event occurred this year (LER 250/86-032) and the licensee initiated a request for engineering assistance (REA) to review the design of instrument loops and the instrument ground system. This REA will be tracked under LER 250/86-032.

(Closed) LER 251/85-023. On August 25, 1985, containment isolation valve CV-4-956A, located in the pressurizer steam space sampling line, was not tested during the second quarter of 1985 due to being on the in-plant equipment clearance order 85-4-20. The licensee completed the following corrective action. The valves was satisfactorily tested September 1, 1985, and OP-0209.1, Valve Exercising Procedure, was revised to require that when a valve cannot be tested because its operation is prevented by a clearance, a note will be placed on the clearance to require the valve to be tested prior to releasing the clearance and placing it back in service.

(Closed) LER 251/85-024, ESF Actuation - Component Cooling Water (CCW) Automatic Start. The cause of the automatic start of the 4A CCW pump was the result of maintenance and post-maintenance testing performed on the auto-start circuitry. Procedure 3/4-OSP-030.5, CCW Pumps Low Header Pressure Start Test, was changed to include a testing sequence for the automatic start feature of the CCW pumps.

(Closed) LER 251/85-025, Reactor Protection System Actuation- Reactor Trip. On November 23, 1985, Unit 4 experienced a reactor trip while at hot standby conditions. The intermediate range detectors were found to be over-compensated. This allowed the source range detectors to be energized above the reactor trip setpoint. The compensation voltages were adjusted to proper tolerances.

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(Closed) LER 250/85-029, ESF Actuation - Containment and Control Room Ventilation Isolation. Process radiation monitoring instruments R-11 and R-12 were taken out of service, by pulling the power fuses, on both units to facilitate the repair work on the filter drive for unit. Since pulling the fuses were not part of a procedural evolution, the ventilation system isolation constituted an automatic initiation of an ESF system. Off-normal operating procedure (ONOP) 11108.1, Process Radiation Monitor-Off Normal Condition Operation, was revised to describe the actions to be taken to place the containment and control room ventilation isolation systems in their required post accident configurations whenever R-11 and R-12 need to be taken out of service.

(Closed) Violation 250/84-22-03 and 251/84-23-03, Failure to establish quality control (QC) holdpoints for several procedural steps which deal with critical measurement and adjustments in MP 4107.7, High Head SIS (Safety Injection System) Pump Disassembly, Replacements of Rotating Elements and Reassembly. The licensee has revised the QC holdpoints for procedure MP 4107.7. Additionally, the licensee revised AP 0190.19, Appendix A, Control of Maintenance on Safety Related and Quality Related Systems, to further define holdpoint criteria.

(Closed) Inspector Followup Item (IFI) 250, 251/83-38-07, OP 13514.2, Containment Access Hatch Local Leak Rate Test, had various discrepancies. The licensee has revised the procedure to correct these discrepancies.

(Closed) IFI 250, 251/83-38-08, Consolidate the Plants Position on Independent Verification. The licensee has issued procedure O-ADM-031, Independent Verification, step 5.1 covers the plant policy on independent verification.

(Closed) Violation 250, 251/83-38-04, a procedural change was made to OP 16200, Manipulator Crane Operating Instructions, and this change was not approved prior to being utilized. The licensee has made a permanent change to the procedure, and it has received the appropriate reviews and approvals.

(Closed) Violation 250, 251/82-24-01, Corrective Actions for "Fire Stop Inoperable". This violation is administratively closed and will be tracked under the corrective action for Violation 250, 251/86-39-01.

(Closed) IFI 250/84-11-04, 251/84-11-02, Rewrite the Main Steam Isolation Valve Testing Procedure. Procedure 3/4-OSP-072.1 has been rewritten.

(Closed) Violation 250/84-14-04, OP 0206.6, Hydrostatic Pressure Testing for ISI Requirements, did not adequately address the requirements established in Quality Assurance Manual, procedure QP-11.4, Test Control Program, Section 5.2.4. Procedure OP-0206.6 has been revised to meet the requirements of QP-11-4.



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(Closed) IFI 250, 251/83-41, 40-06, Revise OP-4004.1, Containment Spray Pumps - Periodic Test, to increase the testing frequency if pump vibration values are within the alert range. The procedure has been revised to have the testing frequency doubled if the pump vibration valves are within the alert range.

(Closed) IFI 250, 251/83-32-03, Revise OP 1004.4, Overpressure Mitigating System Functional Test and Nitrogen Back Up System Leak Check. The licensee has revised the procedure.

(Closed) IFI 250, 251/83-26-05, Revise Procedure OP 14004.1, Steam Generator Protection Channels - Periodic Test, to decrease the chances of a spurious and unnecessary reactor trip. The licensee has revised the procedure.

(Closed) IFI 250, 251/83-26-03, Review of Key Control Policy. Procedure O-ADM-205, Administrative Control of Valves, Locks and Switches, was issued and this procedure administratively controls keys for valves, locks and switches.

(Closed) URI 250, 251/81-31-03. The determination has been made as to which pressure and temperature instruments provide a permanent record of transients. The licensee has Control Room recorder charts to aid them in transient reviews.

(Closed) URI 250, 251/85-33-01. The adequacy of the licensee's 10 CFR 50.59 review of a turbine runback system modification to delete the negative flux rate circuitry has been completed. The Office of Nuclear Reactor Regulation (NRR) stated in a memorandum dated April 15, 1986, "if it is assumed that protection is required only for drop of a single rod, the analysis approved by NRR in January 1983 shows that runback is not required. Thus, the diversity would no longer be required." Additionally, NRR stated that the licensing basis of record for Turkey Point is that for a single rod drop.

(Closed) URI 250, 251/85-33-02, Non-reporting of the operation of the plant outside of its analysis. NRR stated that Turkey Points "licensing basis of record is that for a single rod drop." Additionally, NRR stated, "The removal of the negative rate input from the turbine runback system was found to be acceptable on the basis that protection was assured for both types of events," that is both single and multiple rod drop events.

(Closed) Violation 250, 251/85-30-01, Failure to Perform Independent Verification of OP 3204.1, Residual Heat Removal Periodic Test, section 8.8.4, prior to running the Unit 4A residual heat removal pump. OP 3204.1 was rewritten to ensure each step of the procedure is user friendly and that only one action is required per step.

(Closed) Violation 250, 251/85-44-01, Failure to Meet the Requirements of TS 6.8.1, two examples: OP 0202.1, Reactor Startup - Cold Condition to Hot Standby Condition, has been revised to require the accumulators be filled and pressurized prior to exceeding 1000 psig. AP 0103.4, In-Plant Equipment Clearance Orders, has been revised to require that prior to releasing a

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clearance the components within the clearance boundary be aligned in accordance with the applicable plant procedure.

(Closed) IFI 250, 251/85-44-02, Followup on Numerous EDG Fuel Oil Items. The 10 items identified in inspection report 85-44 have been corrected.

(Closed) URI 250/86-35-01. This unresolved item documented an NRC concern that a programmatic surveillance problem might exist as evidenced by numerous TS required surveillances which were not performed when required. On at least four occasions in 1985 TS required surveillances were not performed within the required periodicity. Between January and June 1986, at least nine TS surveillances were performed late. Evaluation of the available data has resulted in the issuance of violation (250, 251/86-39-02).

The following LERs were evaluated during the resolution of URI 250/86-35-01 and are considered closed. In each case, the licensee was judged to have implemented the corrective actions specified in the respective LERs. However, that action did not preclude additional missed surveillances. Corrective action to implement a more effective surveillance program will be tracked as part of the followup to violation 250, 251/86-39-02. Additional licensee efforts with respect to these individual LERs are not required pending implementation of programmatic improvements.

Closed

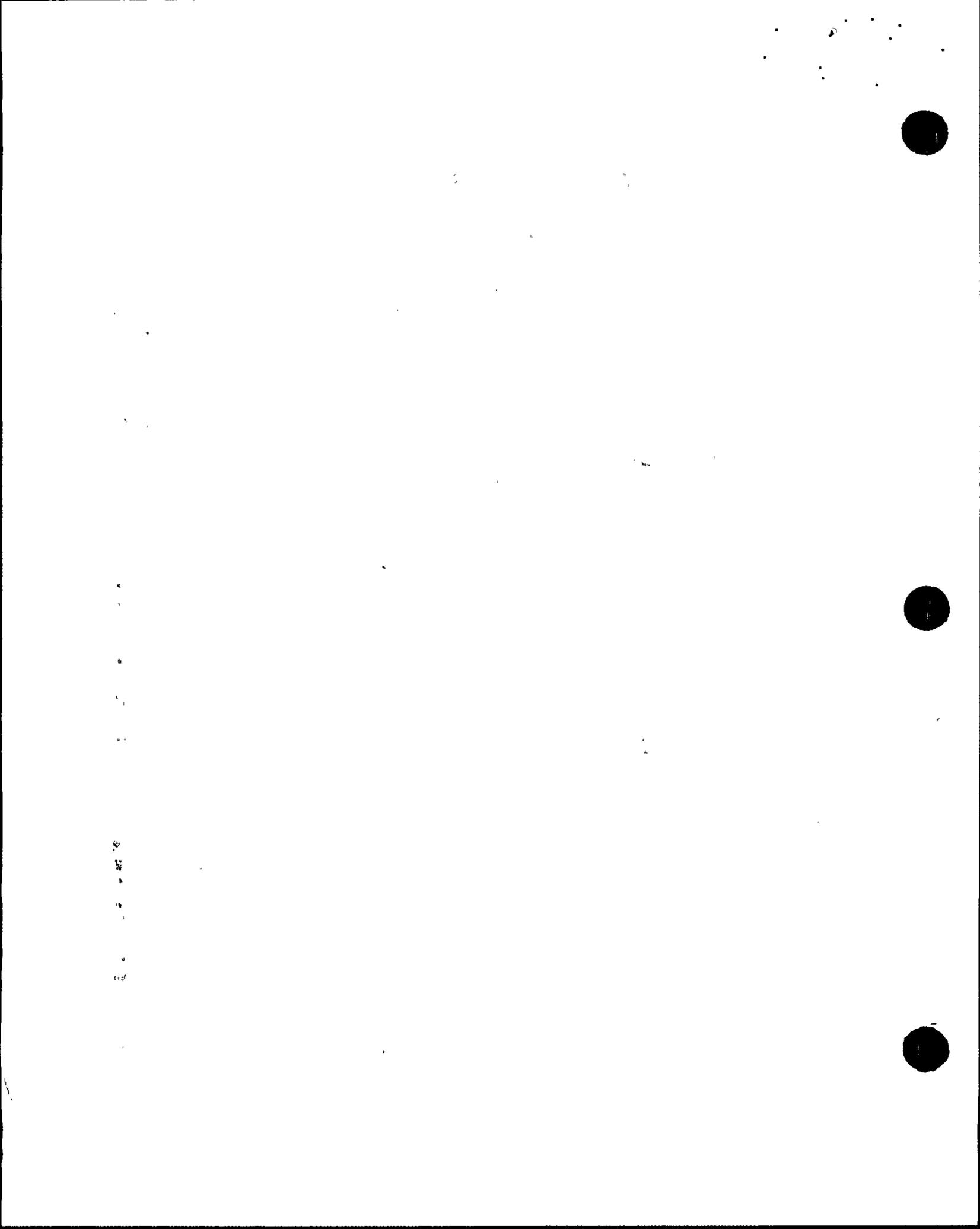
LER 250/85-01
LER 250/85-07
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LER 250/85-28

Closed

LER 250/86-11
LER 250/86-13
LER 250/86-20
LER 250/86-27
LER 250/86-29

(Closed) URI 251/86-35-02. This URI resulted from a concern that TOP 233 might be inadequate, in that it failed to address the need to defeat the "at power" reactor trips when the procedure was being performed in cold shutdown. The NRC was concerned that each performance of the procedure, while the reactor was in cold shutdown, would result in an actuation of the reactor protective system due to opening of the reactor trip breakers. This concern has been evaluated and TOP 233 has been determined to be inadequate. A detailed discussion of this issue is found in paragraph 10. URI 251/86-35-02 has been resolved as example one of violation (251/86-39-01).

(Closed) URI 250, 251/86-33-08. This item resulted from an NRC concern that administrative controls of fire doors might not be sufficient to prevent otherwise fully operable fire doors from being rendered inoperable by propping the doors open. Six discrepancies were identified in June 1986, which seemed to indicate a programmatic deficiency. An evaluation of the licensee's program for the control of fire doors has been completed. It was determined that adequate procedures did not exist to prevent the doors from being removed from service without the knowledge of responsible personnel. URI 251/86-33-08 has been resolved as violation example (250, 251/86-39-01).



(Closed) URI 250, 251/86-35-03. This item resulted from an NRC concern that AP 0103.36 was not being properly implemented with respect to the control of temporary information tags and operator aids. An evaluation of observed discrepancies revealed that the licensee had previously identified, through audit findings, that the procedure was not being correctly implemented. Consequently, an evaluation was performed which concluded that the licensee's corrective action for previous deficiencies were inadequate, in that they failed to preclude similar deficiencies identified by the NRC. URI 250, 251/86-35-03 has been resolved as violation (250, 251/86-39-02), example 2. This violation is discussed in paragraph 9.

4. Unresolved Items

An Unresolved Item is a matter about which more information is required to determine whether it is acceptable or may involve a violation or deviation. Three unresolved items identified during this inspection are discussed in paragraph 9, 11 and 14.

5. Inspection and Enforcement (IE) Bulletin Followup (92703)

(Open) Bulletin 79-14, Seismic Analysis for As-Built Safety-Related Piping Systems. As a result of the discrepant field condition identified on the Unit 3 Containment Spray System as discussed in paragraph 9.c, the licensee is considering a reevaluation of the effectiveness of their Bulletin 79-14 upgrade program.

6. Performance Enhancement Program

Periodic meetings were held with the Site Engineering Manager and his staff throughout the inspection period to determine the status of the Phase II Assessment Program. A brief description of the small bore piping upgrade program objectives follows in paragraph 9.b.

7. Monthly and Annual Surveillance Observation (61726/61700)

The inspectors observed TS required surveillance testing and verified: that the test procedure conformed to the requirements of the TS, that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operations (LCO) were met, that test results met acceptance criteria requirements and were reviewed by personnel other than the individual directing the test, that deficiencies were identified, as appropriate, and were properly reviewed and resolved by management personnel and that system restoration was adequate. For completed tests, the inspectors verified that testing frequencies were met and tests were performed by qualified individuals.

The inspectors witnessed/reviewed portions of the following tests activities:

Emergency Diesel Generator Periodic Test Load on 4KV Bus
 Unit 4 Auxiliary Feedwater Train I Operability Verification
 Unit 3 High Head Safety Injection System Periodic Test

In 1985, the licensee failed to perform four TS surveillances within their required periodicities. The missed surveillances resulted from personnel inattentiveness and either scheduling deficiencies or omissions. Corrective actions, as itemized in LERs 250/85-01, 250/85-07, 250/85-08 and 250/85-28, were implemented by the licensee to correct the identified problems.

Between January and June 1986, the licensee failed to perform at least nine additional TS surveillances within their required periodicities. Again, the missed surveillances were determined, in LERs 250/86-11, 250/86-13, 250/86-20, 250/86-27 and 250/86-29, to be the result of personnel inattentiveness and either scheduling deficiencies or omissions. Consequently, the corrective actions implemented by the licensee in 1985 did not prevent the occurrence of similar missed TS surveillances in 1986.

10 CFR 50, Appendix B, Criterion XVI, as implemented by FPL Topical Quality Assurance Report (FPL-NQA-100A) Revision 8, TQR 16.0, Revision 4, Corrective Action, requires, in part, that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

As a result of an evaluation of licensee performance in the area of surveillance procedure implementation, it was determined that the licensee had failed to take adequate corrective action to preclude the recurrence of missed TS required surveillances. It was determined that the licensee's corrective actions, as specified in each of the LERs, addressed individual weaknesses but were narrowly focused and did not produce necessary programmatic changes. Consequently, UNR 250/86-35-01 was resolved as example one of violation (250, 251/86-39-02) in this report.

8. Maintenance Observations (62703/62700)

Station maintenance activities of safety related systems and components were observed and reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides, industry codes and standards and in conformance with TS.

The following items were considered during this review, as appropriate: that LCOs were met while components or systems were removed from service; that approvals were obtained prior to initiating work; that activities were accomplished using approved procedures and were inspected as applicable; that procedures used were adequate to control the activity; that trouble-shooting activities were controlled and repair records accurately reflected the maintenance performed; that functional testing and/or calibrations were

performed prior to returning components or systems to service; that QC records were maintained; that activities were accomplished by qualified personnel; that parts and materials used were properly certified; that radiological controls were properly implemented; that QC hold points were established and observed where required; that fire prevention controls were implemented; that outside contractor force activities were controlled in accordance with the approved QA program; and that housekeeping was actively pursued.

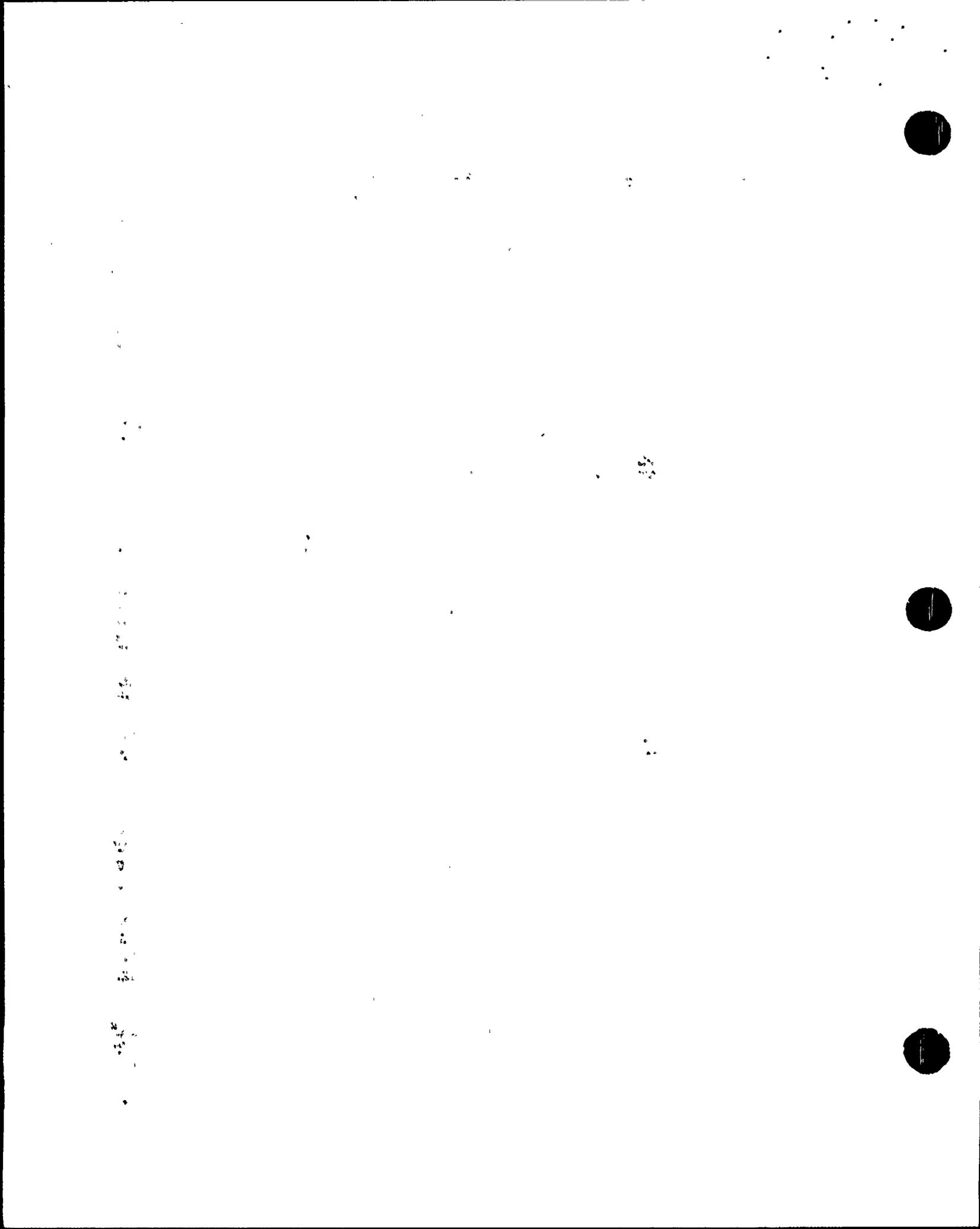
The following maintenance activities were observed and/or reviewed:

Unit 4 Rod Position Indication inverter troubleshooting/repair Plant
Work Orders (PWOs) 64-5091 and 64-5126
Unit 4 Maintenance Procedure 1807.4, Rod Position Indication Amplifier
and Indicator Adjustments
Inspection/Repair of Component Cooling Water Heat Exchanger Channel
Heads
Repair of 3A Intake Cooling Water Pump Anchor Base
Repair of Unit 3 Charging Pumps

- a. On September 9, 1986, a through wall leak was discovered in the 3C CCW heat exchanger outlet channel head. The hole was approximately a 7/8" x 1/2" oval. Preliminary ultrasonic examination indicated the effected area was approximately two square inches. Initial findings indicated that corrosion pitting, caused by failure of the channel head protective cold tar coating, exposed the carbon steel channel heads directly to the salt water of the intake cooling water system.

On September 11, 1986, nonconformance report (NCR) 86-331 was generated requiring untrasonic tests (UTs) and visual inspections of all inlet and outlet CCW channel heads for both units. The through wall hole and all other areas of pitting were temporarily repaired by preparing the surfaces and applying a coating of Belzona Ceramic R. A minimum cure time of eight hours was required prior to returning the heat exchanger to service. On September 23, 1986, QC issued a stop work order, referenced in QC memo PTN-QC-86-247, due to weaknesses in the PWO, shift turnover briefings, and proper supervision. The deficiencies were resolved and the repairs were completed. The QC findings did not constitute NRC violations as they met the criteria specified in 10 CFR Part 2, Appendix C.V.A., Notice of Violation.

IFI 250/84-34-01 and 251/84-35-10 addressed corrosion problems experienced in the CCW heat exchangers and referenced IE Notice (IEN) 84-71: Graphite Corrosion of Cast Iron in Salt Water. IEN 84-71 discussed several methods for reducing corrosion attack, including corrosion resistant coating in conjunction with sacrificial zinc plates and, as another method, cathodic protection. The notice warned that extreme care should be taken when the protective coatings are applied, as small breaks in the coating would actually accelerate the localized

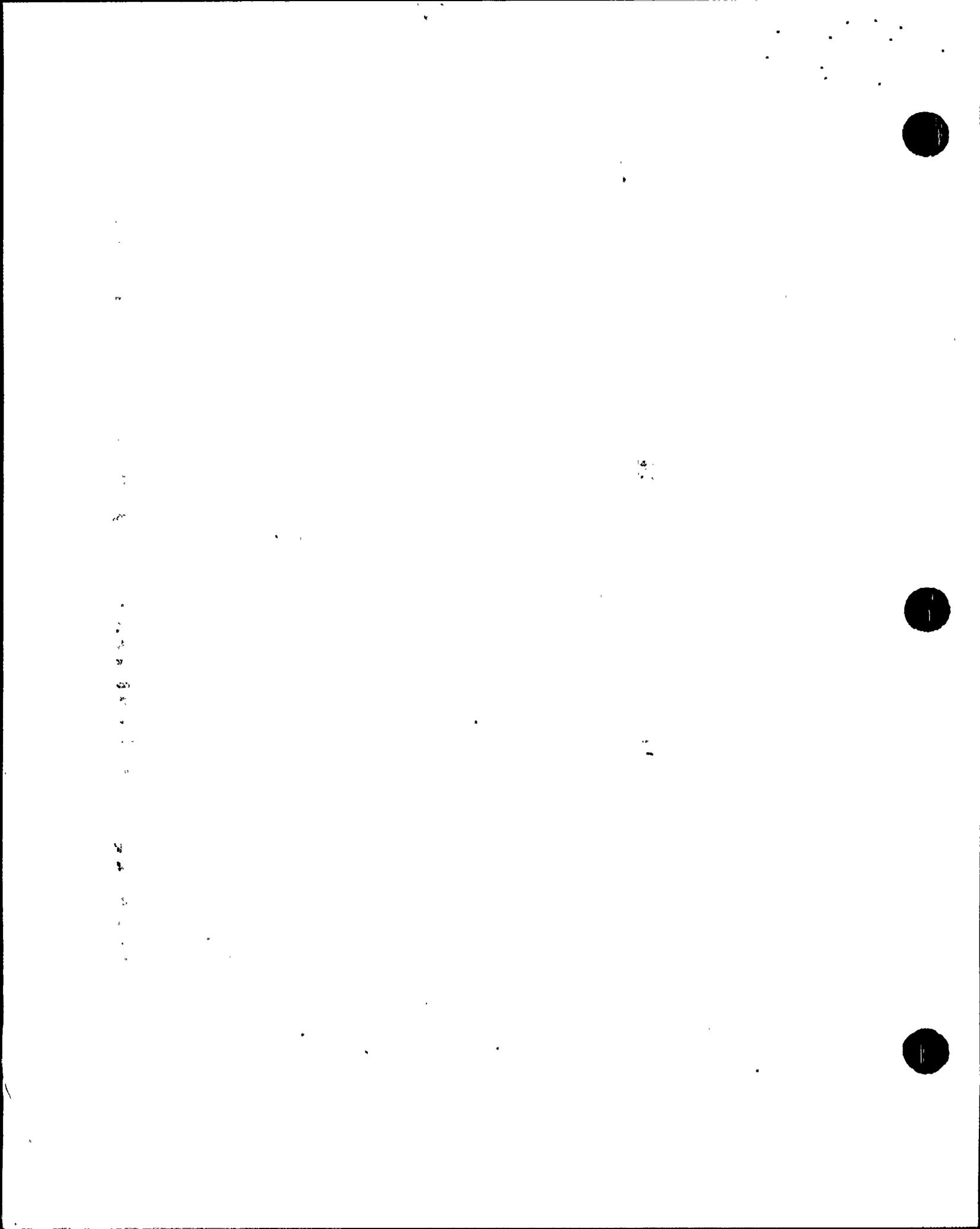


corrosion. It also noted that cathodic protection has the potential to do more harm than good if not monitored properly. Plant Turkey Point CCW heat exchangers utilize a protective coating without sacrificial zincs but with cathodic protection to reduce corrosion. The licensee stated that flaws in the application of the protective coating probably caused the most recent corrosion pitting problems. The cathodic protection system effectiveness has been greatly reduced as a result of the frequency of hydro cleaning of the heat exchangers. Each heat exchanger is removed from service for cleaning approximately once a week. A cathodic protection system must also be deenergized and removed from service to facilitate the cleaning process. Licensee engineering personnel stated that it takes the cathodic protection system approximately seven days to stabilize and operate at optimum efficiency after being returned to service. Due to the continuing corrosion problems with the CCW heat exchangers and questions of the effectiveness of the corrosion reduction methods utilized, IFI 250/84-36-10, and 251/84-35-10 will remain open.

- b. On September 24, 1986, when the 3A intake cooling water (ICW) pump was started for testing of the associated discharge check valve, the concrete mounting pad for the pump raised approximately 3/16 inch off the intake structure. The pad lifted at the pump discharge end which is the north facing side of the pad. NCR 86-336 was generated to document the mounting pad condition. A temporary repair procedure was developed and performed in accordance with Temporary System Alteration (TSA)-3-86-19-49. The existing two north facing anchor bolts were removed by core drilling and were analyzed. The hole was then core drilled completely through the intake structure. New through bolts were installed to provide greater anchorage capacity. Post installation testing consisted of visual verification of no mounting pad vertical movement during three pump starts. A program was established to inspect the remaining ICW pumps on both units. No motion was detected. The pumps will also be monitored during monthly surveillances. The anchor bolts that were removed from the 3A ICW pump were 12 inch straight stainless steel, the design drawing called for 20 inch carbon steel bolts with a 30 degree bend and anchor plate on the embedded end. The licensee is developing a method to non-destructively determine the composition and dimensions of the remaining in place anchor bolts.

The mounting pads for all the ICW pumps have some degree of degradation due to chipped or cracked grouting. Two NCRs have been generated as a result. The Unit 4 mounting pads are presently being repaired. The Unit 3 mounting pads will be repaired when the Unit 4 repairs are completed.

- c. On September 25, 1986, all three Unit 3 charging pumps were declared out of service, requiring the unit to begin a shutdown as required by TS.3.0.1. The 3A charging pump was already out of service due to a damaged suction stabilizer. A charging pump must be able to maintain at least a 45 gpm orifice to be considered in service. However, the



licensee requires a pump that has received maintenance repairs to hold a 60 gpm letdown rate prior to being considered back in service. The 3B and 3C charging pumps could hold a 45 gpm orifice but not a 60 gpm orifice. The 3B pump internal suction and discharge valves were overhauled and the casing was vented to remove entrained gasses. After this maintenance, the pump was retested and failed to hold either a 60 or 45 gpm letdown rate and was declared out of service. The 3C pump discharge relief valve was suspected of leaking by. This condition would effect the flow rates of all three pumps since the pumps discharge into a common header. The relief valves for each pump discharge to the volume control tank. The 3C pump was racked out and the suction and discharge valves were closed, isolating the pump and relief valve from the 3A and 3B pumps. At this time, the 3C pump was declared out of service and Unit 3 entered TS 3.0.1, which requires a reactor to be unloaded and shutdown when no charging pumps are operable. The 3B pump was vented again and retested and satisfactorily maintained a 60 gpm orifice. The 3B pump was declared back in service, removing Unit 3 from TS 3.0.1, but it remained in TS 3.6.d.1. The 3C discharge relief valve was replaced and the pump was tested satisfactorily, removing Unit 3 from the 24 hour LCO of TS 3.6.d.1.

The positive displacement charging pumps at Turkey Point have had a history of maintenance problems. Turkey Point has experienced 31 charging pump malfunctions in 1986. The licensee formed a Quality Improvement Program (QIP) Charging Pump Response Team to identify the root causes for the failures, improve troubleshooting and maintenance procedures, and increase system availability. Gas accumulation in the Chemical and Volume Control System (CVCS) at the pumps was identified as the major cause of the failures. Gas accumulation would: reduce suction stabilizer efficiency; reduce flow rates; cause pressure spiking which would damage relief valves, packing, and pump internal valves; reduce pump life; and cause piping vibration failures. The licensee believes that newly developed troubleshooting and venting procedures as well as proposed system modifications will increase charging pump reliability and availability.

On September 25, 1986, the licensee requested an emergency TS change to allow operation of the Unit 3 reactor longer than 24 hours prior to entering TS 3.0.1 when two of the three charging pumps are out of service. During discussions between the licensee and NRC relative to this matter, the licensee determined that all three charging pumps were out of service. Shortly thereafter, the licensee returned two of the three charging pumps to service and the request for the TS change was withdrawn.

No violations or deviations were identified in the areas inspected.



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9. Operational Safety Verification (71707)

The inspectors observed control room operations, reviewed applicable logs, conducted discussions with control room operators, observed shift turnovers and confirmed operability of instrumentation. The inspectors verified the operability of selected emergency systems, verified that maintenance work orders had been submitted as required and that followup and prioritization of work was accomplished. The inspectors reviewed tagout records, verified compliance with TS LCOs and verified the return to service of affected components.

By observation and direct interviews, verification was made that the physical security plan was being implemented.

Plant housekeeping/cleanliness conditions and implementation of radiological controls were observed.

Tours of the intake structure and diesel, auxiliary, control and turbine buildings were conducted to observe plant equipment conditions including potential fire hazards, fluid leaks and excessive vibrations.

The inspectors walked down accessible portions of the following safety related systems to verify operability and proper valve/switch alignment:

- Emergency Diesel Generators
- Auxiliary Feedwater
- Control Room Vertical Panels and Safeguards Racks
- Unit 3 Containment Spray System
- Units 3 and 4 Containment Purge Valves (external)
- Unit 3 Component Cooling Water System

- a. In September 1985, the licensee identified, during a routine audit, that portions of AP 0103.36, Control of Operator Aids and Temporary Information Tags, was not being properly implemented. Records indicated that quarterly audits and monthly reviews were performed but they were not documented in the manner prescribed by AP 0103.36. Corrective action was implemented to ensure that procedural requirements were met.

In June 1986, an additional audit identified that quarterly audits and monthly reviews required by AP 0103.36 were not being performed. A reminder to perform the audits and reviews had been inadvertently deleted from a scheduling procedure. Consequently, between February and June 1986, the audit and review requirements specified in AP 0103.36 were not implemented. Corrective action was implemented to ensure that the scheduling procedure reflected the requirements to perform quarterly audits and monthly reviews of the Temporary Information Tag Log and the Operator Aids Log, as required by AP 0103.36. Concern for licensee compliance with the requirements of AP 0103.36 was documented as URI (250, 251/86-35-03).

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10 CFR 50, Appendix B, Criterion XVI, as implemented by FPL Topical Quality Assurance Report (FPL-NQA-100A) Revision 8, TQR 16.0, Revision 4, Corrective Action, requires, in part, that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

The licensee's corrective actions implemented in September 1985 and June 1986, were ineffective in that the actions did not result in the proper implementation of the procedural requirements of AP 0103.36. Consequently, in September 1986, during an NRC review of AP 0103.36, it was determined that, although records indicated that the quarterly audits and monthly reviews specified in AP 0103.36 were performed, those audits and reviews were not performed in the manner specified by the procedure. Specifically, the results of the past several quarterly audits had not been sent to the Operations Supervisor and the Temporary Information Tag Log had not been signed as required following the completion of the monthly reviews for June, July and August, 1986. Failure to comply with the requirements of AP 0103.36 constitutes example two of violation (250, 251/86-39-02).

- b. On August 8, 1986, during a walkdown of the EDGs, the inspector identified that the small bore piping support for the A EDG fuel line appeared to be loose. The piping could easily be shaken and demonstrated considerable motion with minimal force applied.

The licensee was informed of this apparent discrepancy and an evaluation was performed by Bechtel Power Corporation at the licensee's request (FPL letter JPES PTP-86-1181). It was determined that the fuel oil piping for the A EDG was within the stress allowances for functionality. Documentation of the short term acceptability of the as found piping is contained in Bechtel calculations numbered 5177-M08-600-03, Rev. 0 and 5177-600-P-600-1, Rev. 0.

During the inspection of the A EDG fuel oil piping, the licensee noticed that a hanger for the B EDG fuel oil piping was not properly installed, in that it was clearly not supporting any load. This condition was also evaluated by the licensee and was determined not to pose an operability concern.

On October 6, 1986, during an inspection of the Unit 3 Component Cooling Water (CCW) system, the inspector observed improperly supported small bore piping for the CCW supply and return to the High Head Safety Injection (HHSI) pumps. Three areas of concern were identified:

- o HHSI pump CCW return header down stream of valve 3-708E had a missing U-bolt and a loose U-bolt;
- o horizontal supports appeared inadequate for the HHSI pump CCW supply through valve 3-793, allowing the piping to rub against piping for the CCW chemical addition system; and

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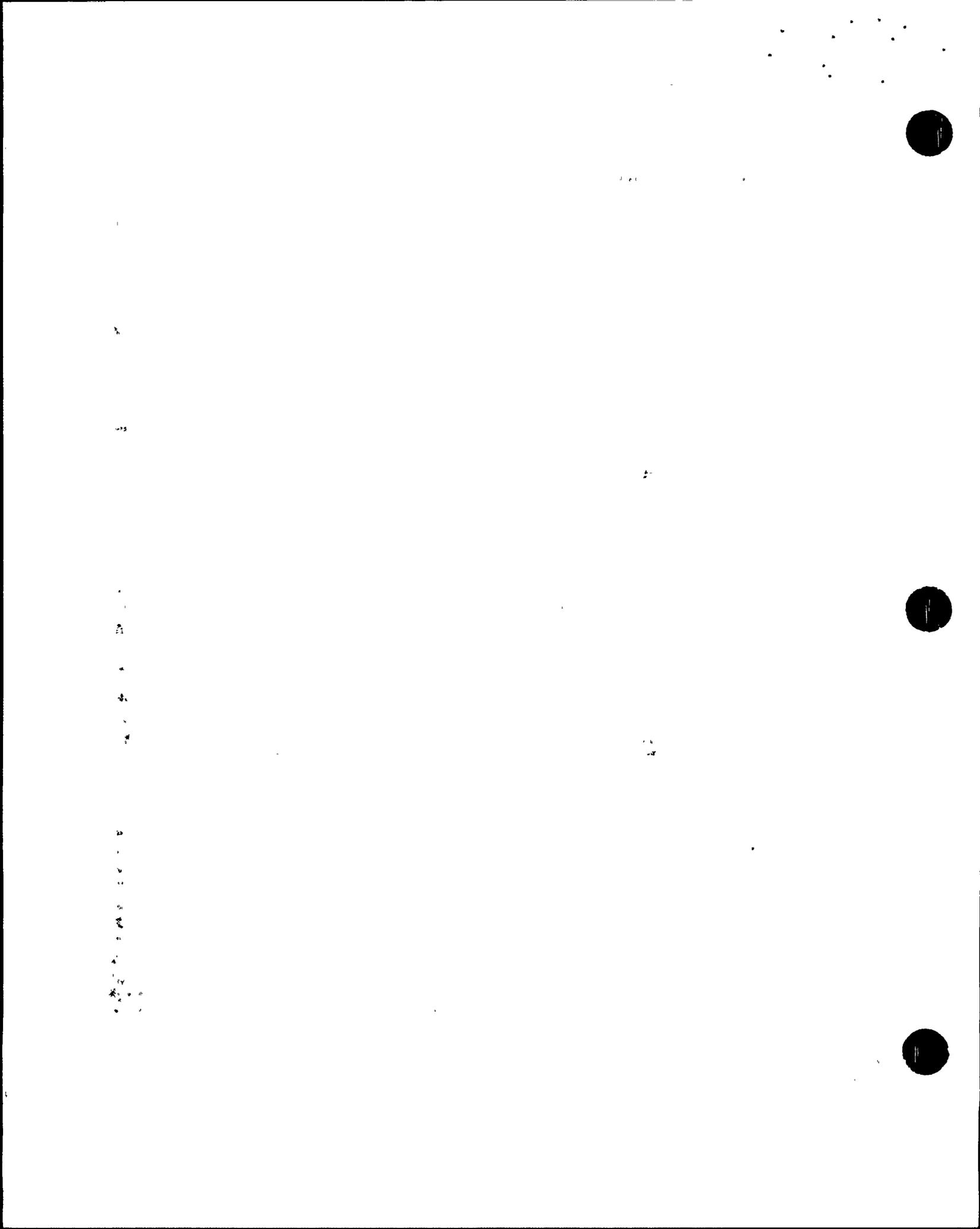
- U-bolts immediately adjacent to both sides of valve 4-856A in the Unit 4 HHSI pump recirculation line to the refueling water storage tank were loose.

Evaluations of these concerns were promptly performed by the licensee. In each case, the piping was determined to be functional and the piping was considered satisfactory for short term operability.

These discrepancies are similar to those addressed in violation 250, 251/86-13-02. While the piping was considered functional, it was not installed in accordance with approved procedures. In response to Inspection Report 250, 251/85-40, URI 250, 251/85-40-25, the licensee committed to perform a walkdown of all 2 inch and under piping associated with safety related systems (FPL letter L-86-29). This commitment was reiterated in FPL letter L-86-238, written in response to the findings of Inspection Report 250, 251/86-13. The adequacy and timeliness of the licensee's small bore piping verification and corrective program with respect to recently identified deficiencies in the emergency diesel generator and component cooling water systems is an unresolved item (250, 251/86-39-04).

Subsequent to the piping support discrepancies identified in the EDG fuel lines and the CCW headers for the HHSI pumps, the licensee presented a proposed schedule for completing the small bore piping walkdowns. Phase 1 of the program has been completed and included all safety related small bore (2 inch and under) piping in the Unit 4 containment and all piping associated with the auxiliary feedwater (AFW) system. The phase 1 portion of the program ended in July 1986. Phase 2, which entails walkdown of all safety related small bore piping outside the containments is scheduled to begin in late November, 1986. The goal is to identify and correct all discrepancies prior to the start of the Unit 3 refueling outage (March 5, 1987). The primary emphasis will be on Unit 3 systems since the Unit 3 outage is approaching. Some Unit 4 piping discrepancies may not be completed prior to the start of the Unit 3 refueling outage. However, the licensee plans to have all Unit 4 discrepancies completed by the end of June, 1987. The phase 3 program addresses all piping discrepancies in the Unit 3 containment. It is scheduled to be complete by the end of the 58 day outage (approximately May 1, 1987).

- c. On October 16, 1986, while performing a Containment Spray (CS) System operational verification inspection the inspectors identified a potential discrepancy pertaining to MOV-3-880A. The motor operator for the valve appeared to make contact with a High Head Safety Injection (HHSI) piping saddle. System operability was of concern and Operations Department personnel were immediately notified of the apparent discrepant condition. NCR 86-333 was generated to document and disposition the problem. Further inspection revealed two additional discrepancies. A U-Bolt on the HHSI piping was loose and a rigid pipe



support on the CS system was identified that is not included in the existing FSAR stress analysis. These three discrepancies were evaluated to determine the operability of the CS and HHSI systems. The conclusion reached in the safety evaluation (JPE-M-86-072) is that the as found condition did not constitute a substantial safety hazard and should not be considered an unreviewed safety question and that the two systems as they existed were operable.

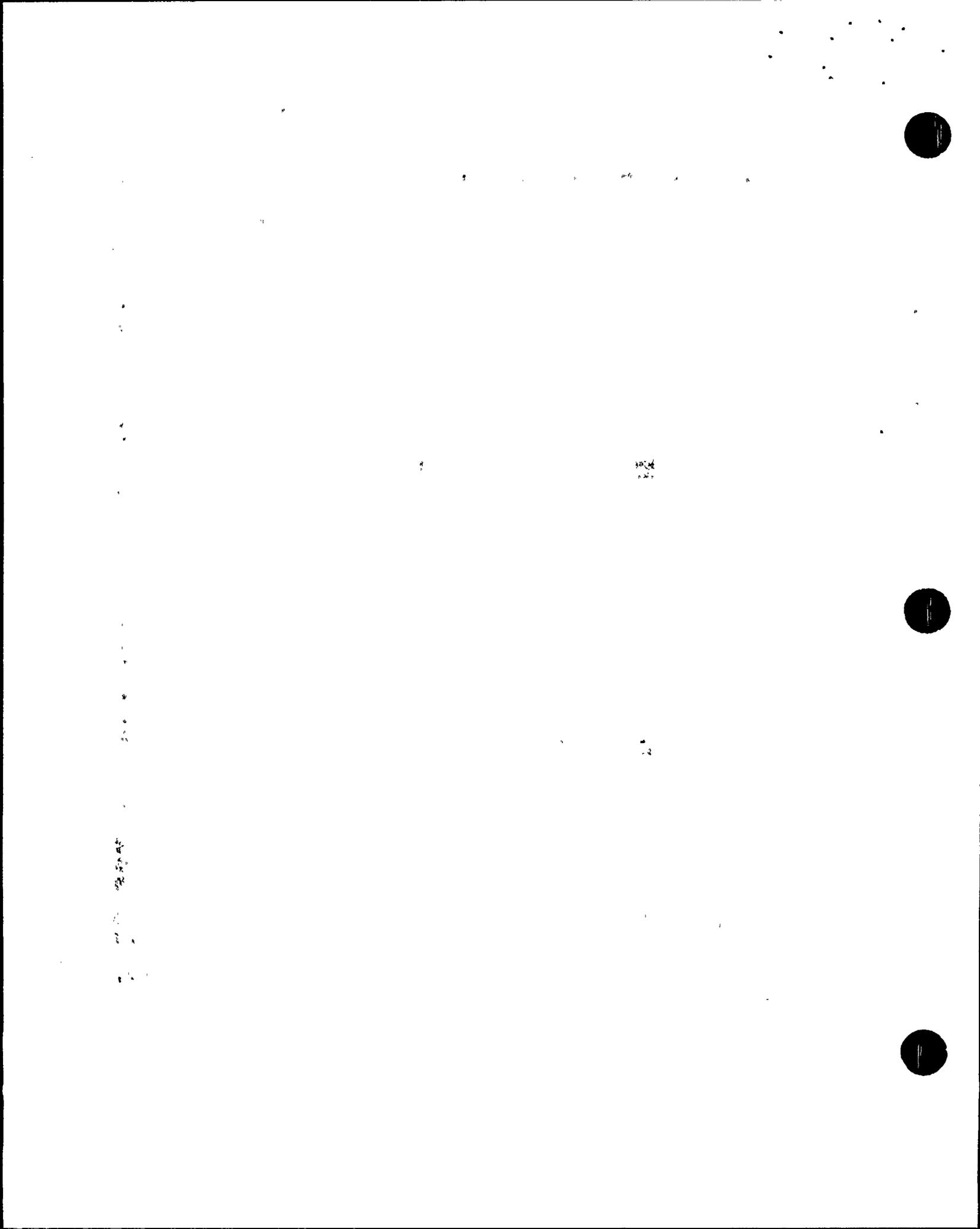
During a subsequent review of the Unit 3 CS system, an additional piping support discrepancy was identified. A horizontal I-beam, used to facilitate the removal of the CS pump motors during maintenance repairs, was observed to be installed such that it touched the Train B CS discharge header. The licensee performed an evaluation of this discrepant condition and determined that the contact did not pose an operability concern.

These CS system discrepancies were discussed in detail with the licensee. The I-beam and MOV-3-880A interference problems had apparently existed for an extended period of time. Neither discrepancy was identified by the licensee during the system walkdowns which were performed as a result of IE Bulletin 79-14. However, each discrepancy was of a type that should have been detected and corrected by those walkdowns. The licensee has, over the past several years, identified additional discrepancies that should have been, but were not, corrected by the 79-14 corrective action program. The licensee is currently evaluating whether the observed discrepancies justify additional piping walkdowns under IE Bulletin 79-14.

- d. TS 6.8.1 requires that written procedures and administrative policies be implemented that meet or exceed the requirements and recommendations of sections 5.1 and 5.3 of ANSI N18.7-1972 and Appendix A of USNRC Regulatory Guide 1.33.

Appendix A of USNRC Regulatory Guide 1.33 states that procedures should be established specifying: (1) authorities and responsibilities for safe reactor operation; and (2) operation of the main steam system.

On August 9, 1986, during plant heatup, a Unit 4 RCO failed to adequately monitor steam generator water level, allowing the level in the 4C steam generator to decrease to the lo-lo alarm setpoint. The trend toward decreasing level existed for several hours prior to reaching the lo-lo alarm setpoint and the condition was not reported to an SRO. This personnel error resulted in the automatic actuation of the AFW, as per system logic design, on lo-lo steam generator level. Failure to report the decreasing SG water level trend toward the AFW automatic actuation setpoint is example one of violation (250, 251/86-39-03).



Procedure 4-OP-065.2, AFW and Main Steam Isolation Valve (MSIV) Backup Nitrogen Gas Supply System, revision dated August 12, 1986, requires, in attachment 2, that MSIV nitrogen station header isolation valves 4-5202, 4-5237 and 4-5272 be closed during normal system alignment. The valves had last been verified to be closed on August 21, 1986, as required by On-The-Spot-Change (OTSC) 4468 to 4-OP-065.2.

On September 25, 1986, the valves were found to be open. This constitutes example two of violation (250, 251/86-39-03).

10. Design Changes (37700)

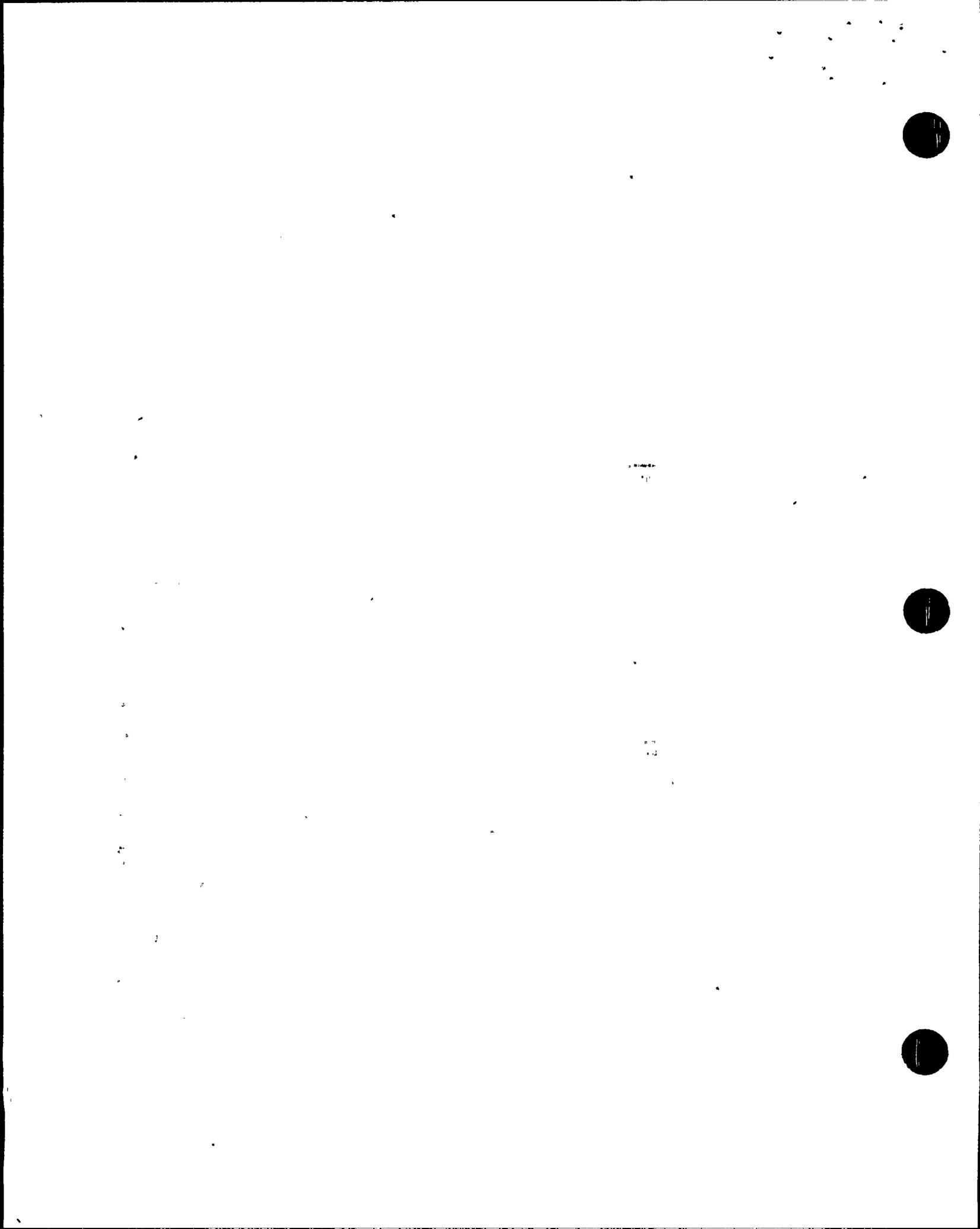
Temporary Operating Procedure TOP-233, Functional Test of Plant Change/Modification (PC/M) 84-211 Turbine Runback Modifications and PC/M 84-209 Power Mismatch Modification, was written to functionally test and verify the proper response of safety related systems effected by the modifications. TOP-233 precautions and limitations state that the reactor be in cold or hot shutdown. The Unit 4 reactor was in cold shutdown and the reactor coolant system (RCS) was solid. P-7, the at power permissive, was blocking the reactor trip logic signals for high pressurizer level, low pressurizer pressure, and RCS low flow (P-7 is enabled at greater than 10% power).

On August 5, 1986, I&C personnel commenced performance of TOP-233. Concurrently, Operations personnel were performing 4-OSP-089 Main Turbine Valves Operability Test. Step 7.2.8 of 4-OSP-089 required the reactor trip breakers to be reset. Step 8.5 of TOP-233 required simulation of turbine first stage pressure above 70% power level. Upon generation of this input, P-7 was enabled and the reactor trip logic was unblocked. The reactor trip breakers opened and a subcritical reactor trip occurred. The control rods were already fully inserted and no transients were generated. Further discussions with I&C personnel and review of TOP-233 revealed that the reactor trip would have occurred solely as a result of performance of TOP-233. Step 8.29 of TOP-233 required resetting the reactor trip breakers. Had the procedure progressed to this step the reactor trip would have immediately reopened actuating the reactor protection system.

Technical Specification 6.8.1 requires that written procedures be established, implemented and maintained that meet or exceed the requirements and recommendations of Appendix A of USNRC Regulatory Guide 1.33.

Appendix A of USNRC Regulatory Guide 1.33 requires procedures for proper operation of safety related systems such as the control rod drive system, nuclear instrumentation system and reactor control and protection system. Operation of these safety related systems was effected by PC/M 84-211 and PC/M 84-209.

TOP-233 was an inadequate procedure, in that, the procedure did not require the P-7 reactor trip signals be cleared or bypassed prior to the simulation of 70% power level. Therefore TOP-233 could not test and verify proper response of the safety related systems effected by PC/M 84-211 and PC/M 84-209. This is example 1 of violation (250, 251/86-39-01).



11. Fire Protection (64704)

- a. During June 1986, numerous discrepancies were identified concerning control of fire doors. These discrepancies were documented as URI (250, 251/86-33-08). In each instance, the control room had not been informed of the fire barrier breaches. Plant personnel in the vicinity of the open fire doors did not take corrective action until questioned by the inspectors.

Appendix A of USNRC Regulatory Guide 1.33 requires that procedures be developed to implement a plant fire protection program.

On six separate occasions between June 4 and June 26, 1986, fire doors were propped open, rendering them out of service as effective fire barriers. The removal of the otherwise operable fire doors from service was neither controlled nor authorized and the doors remained out of service for an unknown period of time. No plant procedure existed specifying the method by which fire doors should be controlled.

The failure to establish an adequate procedure for the control of fire doors has been resolved as example two of violation (250, 251/86-39-01).

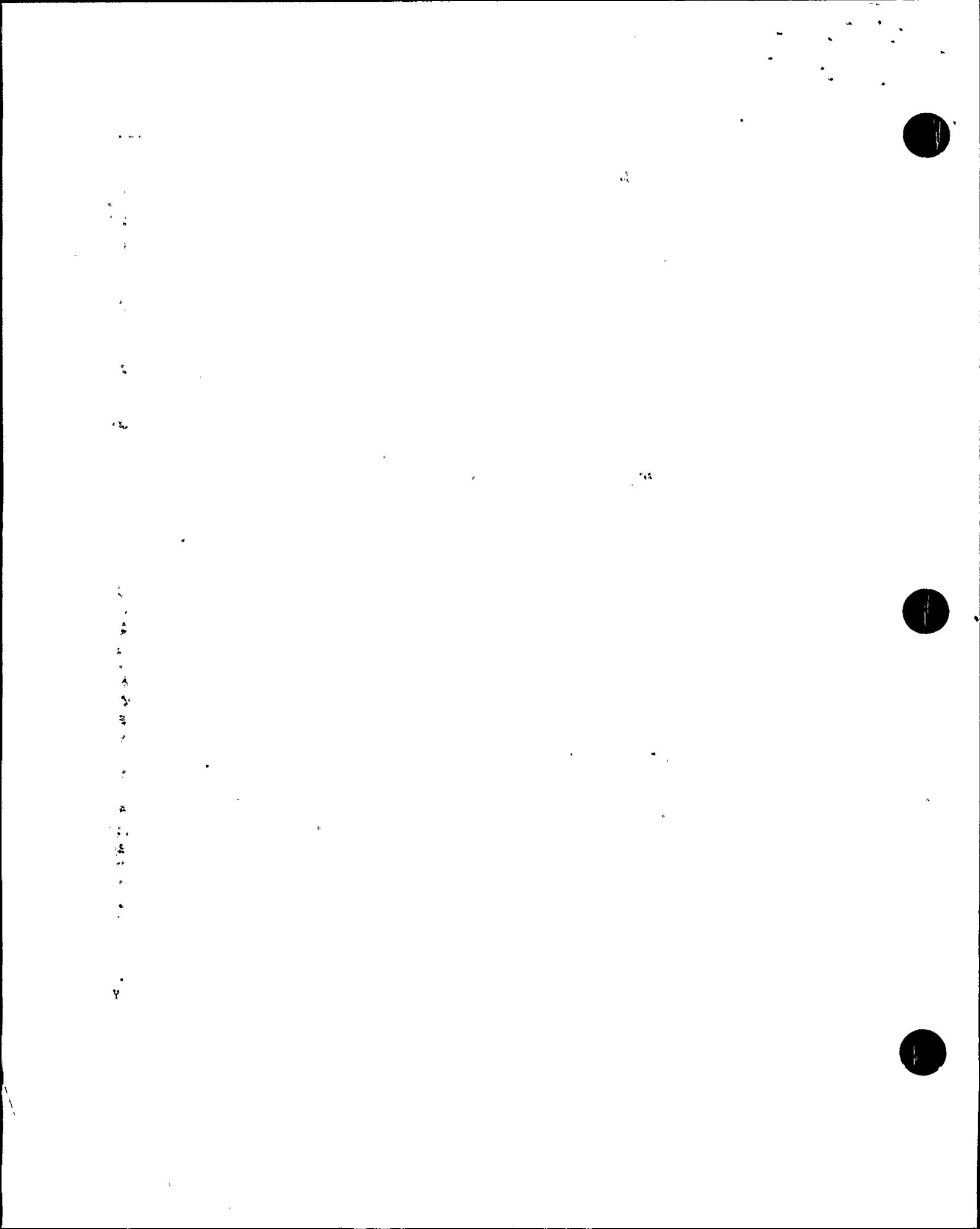
- b. 10 CFR 50.48(c) requires that the fire protection modifications required to satisfy the provisions of 10 CFR 50, Appendix R shall be completed in accordance with the schedules specified in 10 CFR 50.48, Sections (c)(1) through (c)(6).

By letters dated October 11, 1985 and April 4, 1986, the licensee requested schedular exemptions for the completion of Unit 4 raceway (conduit) protection modifications and common (Units 3 and 4) penetration seal modifications. The licensee proposed a completion date of September 1986, for the raceway protection modifications. The licensee proposed a completion date ending 30 days after the end of the Unit 4, Cycle 11 refueling outage for the penetration seal modifications. The Unit 4, Cycle 11 refueling outage ended on September 1, 1986, making October 1, 1986, the required completion date for the penetration seal modifications. As of September 30, 1986, several Unit 4 raceway protection modifications were not complete, and as of October 1, 1986, several common penetration seals were not complete. Failure to satisfy the provisions of 10 CFR 50, Appendix R is an unresolved item pending further NRC review (URI 250, 251/86-39-05).

12. Engineered Safety Features Walkdown (71710)

The inspectors verified operability of the A and B Emergency Diesel Generators by performing a complete walkdown of the system. The following criteria were used, as appropriate, during the walkdown:

- a. System lineup procedures matched plant drawings and the as-built configuration.



- b. Equipment conditions were satisfactory and items that might degrade performance were identified and evaluated (hangers and supports were operable, housekeeping was adequate, etc.).
- c. Instrumentation was properly valved in and functioning and that calibration dates were not exceeded.
- d. Valves were in proper position, breaker alignment was correct, power was available, and valves were locked/lockwired as required.
- e. Local and remote position indication was compared and remote instrumentation was functional.
- f. Breakers and instrumentation cabinets were inspected to verify that they were free of damage and interference.

No violations or deviations were identified in the areas inspected.

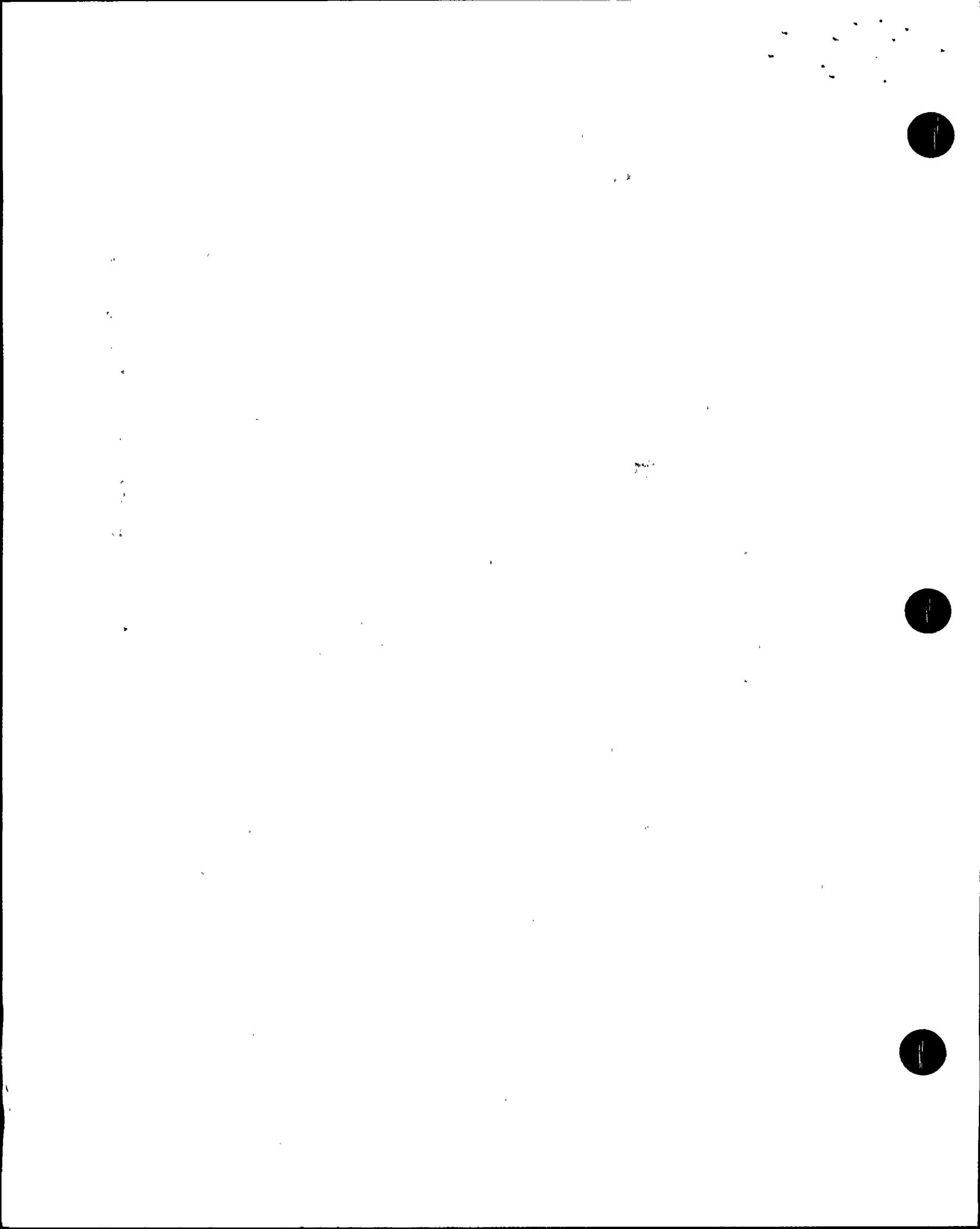
13. Plant Events (93702)

An independent review was conducted of the following events.

On September 16, 1986, Unit 4 was shutdown due the potential for loss of all Rod Position Indication (RPI). During the previous night, the RPI power supply was switched to an alternate supply and troubleshooting initiated after operations personnel observed a burning odor in the vicinity of the RPI inverter. While troubleshooting, multiple rod misalignments, excessive rod bottom bistable relay chatter, and a burning odor from the RPI relays were observed. After Unit 4 was shutdown, maintenance personnel determined that a voltage regulator upstream of both the normal and alternate RPI power supplies had failed and was supplying low voltage to the RPI System. The voltage regulator and 18 burned relays in the RPI racks were replaced and tested satisfactorily and the unit was returned to service.

On September 21, 1986, Unit 3 tripped during the performance of 3-OSP-200.3, Secondary System Periodic Tests. While generating a turbine trip, test personnel are thought by the licensee to have inadvertently allowed the turbine trip test handle to leave the test position which caused a reactor trip on turbine trip. The Auxiliary Feedwater System automatically started on C steam generator low-low level and the unit was stabilized in hot standby. No other unexpected occurrences were observed.

On September 25, 1986, the Emergency Notification System telephone was briefly out of service. Commercial telephone service between the plant and the NRC Operations Center was verified to be operable during this time.



14. Environmental Qualification (10 CFR 50.49) of Limatorque Motor-Operated Valves

On August 20, 1986, Region II's Atlanta based personnel contacted Florida Power and Light Company concerning their 10 CFR 50.49 Limatorque motor-operated valves (MOVs) with regard to IEN 86-03, Potential Deficiencies in Environmental Qualification of Limatorque Motor Valve Operator Wiring. The licensee was requested to advise the Region of the action they had taken with regard to IEN 83-72, Environmental Qualification Notice No. 24, and the above IEN (86-03) and, if required, to provide a justification for continued operation (JCO).

On August 25, 1986, the licensee notified Region II of their action with regard to the request of August 20, 1986. Turkey Point had replaced all questionable wire on their 10 CFR 50.49 Limatorque MOVs that were located inside the containment. This action was performed on both units during their November 1985 outage. As a result of Region II's August 20, 1986 inquiry, a followup review for Limatorque MOVs outside the containment indicated that the environmental qualification of the internal wires may not have been properly supported by available documentation. The questionable wires were replaced by wires that are properly identified and documented to be qualified. The questionable wires will be evaluated and the results will be forwarded to the NRC in approximately six months. The above was followed up with a letter dated August 29, 1986, to the NRC. Since there is some question involving 10 CFR 50.49 interpretation and its 1985 deadline, this is an unresolved item identified as 250, 251/86-39-06, Environmental Qualification of Limatorque Motor Operators.

