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

Report Nos.: 50-250/93-25 and 50-251/93-25

Licensee: Florida Power and Light
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: October 25-29, 1993

Lead Inspector: for M. D. Hunt — 11/18/93 Date Signed

Accompanying Personnel: M. Miller

Other Personnel: M. Holbrook, Consultant, EG&G Idaho-INEL

Approved by: C. Casto, Chief — 11/18/93 Date Signed
Test Programs Section
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope:

This special, announced inspection was performed at the Turkey Point nuclear plant to examine the implementation of the licensee's motor operated valve (MOV) program to meet commitments in response to Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance." The inspectors utilized the guidance provided in Temporary Instruction (TI) 2515/109 (Part 2), "Inspection Requirements for Generic Letter 89-10, Safety-Related Motor-Operated Valve Testing and Surveillance." As delineated in Part 2 of TI 2515/109, this inspection was the initial review of the Licensee's MOV program implementation in response to GL 89-10.

The inspectors reviewed the engineering data for six MOVs including selected portions of design calculations, test packages, and diagnostic signature traces. The inspectors also reviewed follow-up issues from the previous NRC inspection of the MOV program (TI 2515/109, Part 1) conducted in March 1992, and documented in NRC Inspection Report Nos. 50-250/92-08 and 50-251/92-08.

Results:

The inspectors identified the following items during the inspection.

Concerns

1. The procedures for the performance of MOV static testing need to be enhanced to define clearly the acceptance criteria and record the as-found data. These procedures need to consider the 10 CFR50, Appendix B criteria in the verification process for the data collected and equipment/programs used for the test.

2. There was a lack of documentation to support the operation of MOV brake assemblies at less than 90 percent rated voltages. No margins were included in the stem friction coefficient calculation for stem lubrication degradation. The licensee intends to conduct testing to evaluate the appropriate amount of margin required.

3. No margins were set aside for load sensitive behavior (rate of loading) in the licensee's calculations. The licensee was evaluating this margin for dynamically-tested MOVs.

4. In cases where dynamic testing showed original thrust calculations were not conservative, the licensee changed the method of extrapolating the required thrust by directly measuring thrust at control switch trip. Although no operability concerns were noted, no guidelines were provided to account for torque switch repeatibility and other uncertainities in the calculations.

Strengths

1. Aggressive approach to MOV differential pressure testing. Prioritization was given to high DP/low margin MOVs.

2. Performance of multiple differential pressure testing to aid in justifying extrapolation methodology.

3. The use of upstream and downstream pressure transducers to capture time dependent pressure variation during MOV dynamic testing.

4. The measurement of MOV thrust and torque during static and dynamic testing to allow quantification of stem friction coefficients and aid in the evaluation of the load sensitive behavior phenomena.

5. Engineering and maintenance personnel responsible for the MOV program are technically knowledgeable and current in the area of ongoing industry issues.

REPORT DETAILS

1. Persons Contacted

*C. Bible, Supervisor, Site Engineering
*R. Bleaker, Electrical Supervisor, Nuclear Engineering
*J. Cook, Site MOV Coordinator, Plant St. Lucie
*R. Gianfrancesco, Supervisor, Maintenance Support Services
*O. Hanek, Engineer, Licensing
*J. Hoffman, Mechanical Supervisor, Nuclear Engineering
*H. Johnson, Supervisor, Operations
*J. Knorr, Analyst, Licensing
*R. Kundalkar, Manager, Site Engineering
*S. Lankford, Site MOV Coordinator, Plant Turkey Point
*J. Manso, Principal Engineer, Site Engineering
*D. Osborn, Nuclear Assurance
*L. Pearce, Plant General Manager
*M. Pearce, Supervisor, Electrical
*T. Plunkett, Site Vice President
*D. Powell, Manager, Technical Support
*J. Price, Corporate Specialist

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

Other Personnel

*J. Colvin, Mechanical Engineer, ABB Impell

NRC Resident Inspectors

*T. Johnson, SRI
*B. Desai, RI

*Denotes personnel that attended the exit meeting.

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. GENERIC LETTER (GL) 89-10 "SAFETY-RELATED MOTOR-OPERATED VALVE [MOV] TESTING AND SURVEILLANCE" (2515/109)

On June 28, 1989, the NRC issued GL 89-10, which requested licensees and construction permit holders to establish a program to ensure that switch settings for safety-related MOVs were selected, set, and maintained properly. Subsequently, five supplements to the GL have been issued and one issued for comment. NRC inspections of licensee actions implementing commitments to GL 89-10 and its supplements had been conducted based on guidance provided in Temporary Instruction (TI) 2515/109, "Inspection Requirements for Generic Letter 89-10, Safety-Related Motor-Operated Valve Testing and Surveillance."

TI 2515/109 is divided into Part 1, "Program Review," and Part 2, " " "Verification of Program Implementation."

The TI 2515/109 Part 1 program review was conducted March 16-20, 1992 and documented in NRC Inspection Report 50-250/92-08 and 50-251/92-08.

The principal focus of this inspection was to select and review in depth several MOVs from the 111 safety-related MOVs within the GL 89-10 program at Turkey Point Units 3 and 4. Valves were selected from an MOV data information matrix and MOV Testing Status Report provided at the request of the inspectors. The MOV selection was made to examine various systems, valve sizes, and differential pressure conditions, to the extent practicable.

For the MOVs selected, the inspectors reviewed the licensee's GL 89-10 Motor Operated Valve Plant Program, piping and instrumentation drawings, the design-basis calculation results of the expected differential pressure, the sizing and switch setting calculations, the diagnostic test data package, and the MOVATS software generated diagnostic traces.

The following MOVs were selected for review:

MOV-878B	High Pressure Safety Injection Pump Discharge Disconnect Valve
MOV-3-1405	Auxiliary Feedwater Pump Steam Supply Valve
MOV-3-1420	Steam Generator Feedpump Discharge Isolation Valve
MOV-4-843A	Boron Injection To Reactor Coolant System Cold Leg Valve
MOV-4-869	Reactor Coolant System Hot Leg Safety Injection Stop Valve
MOV-4-1420	Steam Generator Feedpump Discharge Isolation Valve

Based on the review of the MOVs sampled, the inspectors determined that the licensee was implementing an effective MOV program. In response to GL 89-10, the review of the MOV documentation verified that the design-basis capabilities were being met. The inspectors concluded that the licensee's implementation of its MOV program addressed the GL 89-10 recommendations and the licensee's commitments to the generic letter.

2.1 Design-Basis Reviews

The inspectors reviewed the licensee's design-basis to determine and verify its adequacy for the six sampled MOVs examined during this inspection. In addition, the recommended action "a" of GL 89-10 that requested the maximum differential pressure and flow expected for both normal and abnormal (accident) conditions was examined to verify that maximum parameters were used. These follow-up reviews were conducted to determine if changes were implemented after the first NRC MOV GL 89-10 Part 1 inspection conducted March 1992. During that inspection, the licensee's design-basis documentation and the electrical calculations for degraded voltage were reviewed. However, the licensee had not completed the design-basis MOV calculations for all 111 MOVs. The licensee had completed calculations for 30 MOVs with 81 calculations remaining that were not complete. During that inspection, the inspectors concluded that the design-basis was adequately addressed the recommendations in GL 89-10. Since that Part 1 inspection, the licensee had received additional information that required further evaluation of the design-basis documentation.

During this inspection the inspectors reviewed the licensee's design-basis calculations and documents to verify that the remaining 81 MOV calculations were completed. Since the Part 1 inspection, many calculations and documents were revised. All of the revised documents and calculations were reviewed to determine and verify that design-basis differential pressure and flow conditions, design temperature, and other design parameters for the MOV selected for review met the recommendations of GL 89-10. The degraded grid calculations were reviewed to ensure that the lowest motor terminal voltage commensurate with design-basis conditions was factored into the MOV electrical calculations. The closure control for all six valves was by torque switch in the closing position and by limit switch in the opening position. Design-basis documentation was reviewed for the selected MOVs that were configured as shown in Appendix A.

The following design-basis documentation, calculations, drawings, and procedures were reviewed:

System Description No. 021, Emergency Core Cooling Systems (MOV-878B, MOV-4-843A, and MOV-4-869)

System Description No. 112, Condensate And Feedwater System (MOV-3/4-1420)

System Description No. 117, Auxiliary Feedwater System (MOV-3-1405)

Design Basis Document, Volume 1, DBD No. 5610-062-DB-002, Revision 3. Auxiliary Feedwater System

Design Basis Document, Volume 2, DBD No. 5610-062-DB-002, Revision 3, Safety Injection System

* PTN-BFJM-90-076, Revision 4 dated July 20, 1993, "NRC Generic Letter 89-10 MOV Design Basis Differential Pressure Determination"

  1) Attachment 12, MOV-3/4-843A/B
  2) Attachment 20, MOV-3/4-869
  3) Attachment 22, MOV-878-A/B
  4) Attachment 25, MOV-3/4-1403, 1404, 1405,
  5) Attachment 27, MOV-3/4-1420, 1421

* PTN-BFJM-92-039, Revision 0 dated November 24, 1992, Determination Of Revised Design Basis Differential Pressure And Thrust Requirements For MOV-3/4-1420 And MOV-3/4-1421

* PTN-BFJM-90-077, Revision 5 dated July 22, 1993, NRC Generic Letter 89-10 MOV Thrust Calculation

* PTN-BFJE-92-022, Revision 0 dated March 9, 1992, PSB-1 Voltage Analysis For Electrical Auxiliary Systems

* PTN-BFJE-90-006, Revision 6 dated August 2, 1993, Motor Operated Valve Voltage Drop Calculations - Generic Letter 89-10

* PTN-BFJE-91-015, Revision 3 dated August 2, 1993, Motor Operated Valve Voltage Drop Calculations Based On EDG 3A And 3B Test Results

* PTN-BFJM-93-019, Revision 0 dated June 28, 1993, Evaluation of MOV Output Torque Capability Considering The Effects Of Derated Motor Starting Torque

* PTN-BFJM-93-003, Revision 2 dated July 14, 1993, Calculation To Determine The Starting Torque, Current And Voltage Of AC Valve Actuator Motors At Elevated Temperatures

* PTN-BFJE-92-032, Revision 0 dated July 13, 1992, 125 VDC Valve Actuator Motor Voltage Drop Calculation - GL 89-10

EC-136, Revision 4 dated August 22, 1991, Existing Stationary Battery Cell Sizing And Voltage Drop Calculation (Verified 105 VDC was minimum DC voltage)

EBASCO Services Incorporated FLO-53-20.5009, Revision 0 dated January 31, 1992, Unit 4 Emergency Diesel Generator Units Dynamic Load Study (Verified degraded grid was worst case minimum voltage for Unit 4)

Electrical Elementary Drawings

1) 5610-E-25, Sheet 35B
2) 5613-E-26, Sheets 12G, and 36A
3) 5614-E-10, Sheet 1
4) 5614-E-25, Sheets 27K and 28P
5) 5614-E-26, Sheet 36A

Mechanical Process Diagrams

1) 5613-M-3074, Sheet 1
2) 5613-M-3075, Sheet 1
3) 5614-M-3062, Sheets 1 and 2
4) 5614-M-3074, Sheet 1

* JPN-PTN-SEMP-93-021, Revision 0 dated June 28, 1993, Reduced Starting Torque Capability For Limitorque Supplied Motors Located In High Temperatures Environments (This document is classified as a Substantial Safety Hazards Evaluation)

*Denotes revision since Part 1 inspection in March 1992.

The licensee was awaiting completion of the NRC staff's reconsideration of the need for PWR licensees to address valve mispositioning as part of their GL 89-10 program.

Besides reviewing the MOV documentation, the inspectors conducted plant walkdown inspections to examine the MOVs for stem lubrication and installed strain gages. The motor control centers (MCCs) were inspected to verify the installed electrical configuration agreed with design drawings. No concerns were identified.

The inspectors identified no concerns with the performance of the design-basis review for the selected MOVs and concluded that the licensee has adequately addressed the design-basis review for the MOVs.

2.2 MOV Sizing and Switch Setting

The inspectors specifically reviewed PTM-BFJN-90-077, "NRC Generic Letter 89-10 MOV Thrust Calculation," PTM-BFJN-90-077, "NRC Generic Letter 89-10 MOV Actuator Evaluation," and the documentation for determination of thrust and torque requirements for the six selected valves.

The licensee's gate valve thrust equation typically used a valve factor of 0.30 for flex wedge gate valves when tested at static conditions. A valve factor of 0.50 for wedge gate valves was used for dynamic (flow) testing. Similar choices using 0.20 static and 0.40 dynamic were selected for double disk gate valves. A valve factor of 1.10 was used

for all globe valves. The licensee had revised their valve factor assumptions for the 18 inch Walworth flex wedge gate valves to approximately 0.76. The value of 0.76 was based on in-situ dynamic test results.

The licensee assumed a stem friction coefficient of 0.20 for those MOVs that were located inside containment, or that experienced high operating temperatures. A stem friction coefficient of 0.15 was used for the balance of MOVs in the program. The licensee had not included a specific margin in its MOV calculations for stem lubrication degradation that might increase the stem friction coefficient over the lubrication interval. The licensee intends to conduct some as-found testing to determine an appropriate margin to account for degradation of the lubricant. Minimum thrust requirements were adjusted to account for diagnostic equipment inaccuracy and torque switch repeatability.

The licensee had not set aside a margin for load sensitive behavior (also known as "rate of loading"). The licensee was assessing load sensitive behavior for specific dynamically-tested MOVs, but had not identified margins necessary for MOVs that will only be tested statically. The licensee intends to review their test data to justify appropriate margins for these valves.

The inspectors noted that the licensee had addressed Limitorque's Potential 10 CFR 21 condition, "Reliance 3 Phase L. C. Actuator Motors (Starting Torque at Elevated Temperatures)," dated May 13, 1993, which dealt with the effect of elevated temperature on the output of AC motors. In response to the issue, calculation PTN-BFJM-93-019, "Evaluation of MOV Output Torque Capability Considering the Effects of Derated Motor Starting Torque," dated June 28, 1993, was developed to assess the impact of derating AC motor output torque. The licensee concluded that all affected MOVs were capable of functioning under design basis conditions. However, MOV-3-6386 and MOV-4-6386 were evaluated as having a small margin and were identified by the licensee as a candidate for future modification to improve actuator torque capability. The inspectors agreed with this conclusion.

2.3 Design-Basis Capability

Calculation PTN-BCJM-93-005, "MOV GL 89-10 Diagnostic Test Data Evaluation," dated September 7, 1993, contained the static test results, and dynamic test packages for the selected valves:

VALVE	CLOSE MAX. D/P	CLOSE TEST D/P	% MAX D/P
MOV-4-843A	1715 psid	1489 psid	87%
MOV-4-869	1715 psid	1474 psid	86%
MOV-878B	1715 psid	425 psid	25%
MOV-3-1405	1118 psid	290 psid	26%
MOV-3-1420	312 psid	330 psid	106%
MOV-4-1420	312 psid	298 psid	96%

The inspectors reviewed the licensee's dynamic test data that used the industry standard equation, the valves' orifice diameters, and the dynamic test conditions. Gate valve factors for the closing direction ranged from 0.16 (double disk) to 0.71 (flex wedge) (see Appendix A). The licensee's test method identified load sensitive behavior as high as 24 percent. The licensee's valve factor assumption for gate valves was not always bounding. However, the licensee had increased their valve factor assumption for their 18" Walworth flex wedge gate valves to 0.76. Stem friction coefficients for the sample valves (determined at flow isolation) were as high as 0.14.

To determine the operability of an MOV, the licensee used linear extrapolation for the thrust necessary to overcome differential pressure to design basis conditions. The licensee was conducting multi-point dynamic tests to develop a justification for their extrapolation methods. Until the licensee completes their justification, the inspectors consider the licensee's extrapolation to be in the first stage of a two stage approach, where the valves are setup using the best available data, as discussed in GL 89-10. The licensee would be expected to justify its method of extrapolation by the schedule commitment date for the completion of their GL 89-10 program.

During review of the dynamic test packages, the inspectors noted that the test acceptance criteria only determined if the assumptions made in the original calculation were conservative. No extrapolations (where necessary) or margin assessments were made prior to returning the valve to service. However, the licensee had completed a detailed review of all dynamic test data conducted before the inspection and no operability concerns were identified. In JPN-PTN-SEMP-032, "Engineering Evaluation for NRC Generic Letter 89-10 MOV Static and Dynamic Test Results,"

Rev. 0, dated October 15, 1993, the licensee identified that a more comprehensive review was required before returning the MOV to service. This document contained specific recommendations for the revision of dynamic test acceptance criteria. The licensee indicated that computer software was being developed to allow the test evaluations to be performed in a timely manner.

The licensee's engineering evaluations typically compared the extrapolated required thrust to the minimum control switch trip (CST) thrust specified in the original calculation. These evaluations provided assurance that sufficient margin existed to account for uncertainties (e.g., torque switch repeatability). However, in those cases where the original thrust calculation was not conservative, the licensee used a different approach, in that the extrapolated required thrust was compared directly to the thrust measured at CST. In these cases, the licensee did not have guidelines specifying the amount of margin that was required to account for torque switch repeatability and other uncertainties. No operability concerns were identified with the use of this approach for the sample MOVs. However, the licensee is developing this guidance for future operability judgements.

During review of the static test package for MOV-4-843A, the inspectors noted that the technician signed off procedure steps. The technicians answered "yes" to questions on a check list that the available thrust was within the specified window when the measured available thrust was less than the minimum required available thrust, corrected for uncertainties. The condition was not identified at the end of the static test, but was later identified by the MOV coordinator after the dynamic test was completed. The valve performance was acceptable during the dynamic test. The licensee performed an additional static test where the torque switch was set higher to allow for additional margin and to bring the measured available thrust in conformance with the requirements of the thrust calculations. The licensee stated that the test procedures will be enhanced to improve the acceptance criteria, and their independent verification process.

The inspectors noted deviations in the MOV-4-843A engineering evaluation's "corrected target" values as compared to the values used in the dynamic test package. Licensee personnel stated that a communication error between maintenance and engineering was the cause of the deviation. Engineering incorrectly assumed that the strain gage had been calibrated with the MOVATS torque thrust cell (which would allow use of a smaller uncertainty), when the strain gage had not been calibrated. This error led to the development of thrust limits that did not adequately account for diagnostic equipment uncertainty. After review of the remaining sample MOVs, it was found that this was an isolated occurrence. The licensee stated they will conduct a review to ensure that similar errors have not occurred, and will develop ways to prevent a recurrence of the event.

During review of test packages for MOV-3-1420, the measured torque at CST exceeded the maximum allowed CST torque by 39 ft-lb. The licensee dispositioned the condition on the basis that the torque limit was not a structural limit. However, the torque limit was based on the actuator's output capability under degraded voltage conditions. This means that the actuator would be unable to generate sufficient output torque to open the torque switch during a degraded voltage condition and could cause the actuator to stall. The licensee reevaluated the maximum allowed torque limit using an application factor of 1.0 that resulted in a corrected maximum allowed CST torque of 1004.4 ft-lb, which was 64.4 ft-lb greater than the measured torque. The licensee also noted that their standard methodology used a more conservative pullout efficiency for the closing direction. The licensee conducted a review and determined that no other concerns were dispositioned using this basis.

The inspectors performed a detailed review of diagnostic traces using the MOVATS 3000 software for the sample MOVs. The licensee used the highest force including hard seat contact as the force used in their extrapolation for design-basis. No concerns were noted in this area.

2.4 MOV Motor Brakes

In Maintenance Update 92-2, Limitorgue Corporation informed the nuclear industry that there was a concern with motor brakes. Limitorque stated it had discovered through operating experience and testing that motor brakes do not minimize the thrust load caused by inertia when closing MOVs. Limitorque also stated it did not qualify motor brakes through its nuclear qualification program. Limitorque warned that voltage variations (low voltage) may render the brakes inoperative. In addition, disconnection of the electrical leads does not render the brake inoperative, the friction pads need to be removed. The inspectors discussed this motor brake concern with the licensee.

The licensee informed the inspectors they were aware of the motor brake issue and had already implemented partial corrective action. Six MOVs with motor brakes, MOV-3-865A, B, & C and MOV-4-865A, B & C were locked open to prevent valve failure due to the motor brakes. These six valveswere scheduled to have the motor brake assemblies removed during the next refueling outage. The licensee also identified twelve additional MOVs with motor brakes installed. These MOVs are listed as follows:

MOV-3-716A	MOV-3-716B	MOV-3-730	MOV-3-872	MOV-3-880A	MOV-3-880V
MOV-4-716A	MOV-4-716B	MOV-4-730	MOV-4-873	MOV-4-880A	MOV-4-880B

The licensee calculated the minimum voltage at the MOV motor brake assembly terminals for brake equipped MOVs in both Units. The 90 percent voltage rating of 460 volts for the brake assemblies is 414 volts. The inspectors verified that the calculated voltages for Unit 4 MOV motor brakes assemblies were above the 90 percent voltage rating at degraded grid voltage. However, the MOV motor brake assembly terminal voltage for Unit 3 MOVs was below the 90 percent rating at degraded

grid. (Degraded grid is the setpoint where the emergency diesel generators start and pick-up load.) The licensee addressed this concern through discussions with other licensees that had MOVs with motor brakes. However, they had not contacted the MOV brake vendor. The inspectors informed the licensee that MOV motor brake concern was under review by the NRC staff. The licensee advised the inspectors that the vendor would be contacted and appropriate corrective action taken. The inspectors requested that the licensee keep the NRC informed of their actions.

The inspector concluded that the licensee was addressing the MOV motor brake concern in a satisfactory manner.

2.5 Schedule

In GL 89-10, the NRC staff requested that licensees complete all design-basis reviews, analyses, verifications, tests, and inspections that were initiated to satisfy the generic letter recommendations by June 28, 1994, or three refueling outages after December 28, 1989, whichever is later.

The licensee's commitment to GL 89-10 requires that all MOVs within the scope of its GL 89-10 program be tested with their design-basis capability verified by June 1994. The licensee's schedule indicated that this commitment will be met. Approximately 21 MOVs remain to be dynamically tested during Refueling Outage 5, which is scheduled to begin in May 1994.

2.6 Pressure Locking and Thermal Binding

The Office for Analysis and Evaluation of Operational Data (AEOD) has completed a study of pressure locking and thermal binding of gate valves. AEOD concluded in its report that licensees have not taken sufficient action to provide assurance that pressure locking and thermal binding will not prevent a gate valve from performing its safety function. The NRC regulations require that licensees design safety-related systems to provide assurance that those systems can perform their safety functions. In GL 89-10, the staff requested licensees to review the design basis of their safety-related MOVs.

The inspectors reviewed several licensee's documents that addressed pressure locking and thermal binding. FPL had performed an evaluation in response to INPO SOER 84-7 and identified 40 valves that were subject to pressure locking and thermal binding. The inspectors reviewed a draft list that contained 59 valves as the result of the GL 89-10 study. The licensee has modified 22 MOVs to preclude pressure locking. The inspectors reviewed engineering evaluation JPN-PTN-SEMJ-89-066, Revision 1, Evaluation of Pressure Locking of Motor Operated Gate Valves, dated December 12, 1989, which evaluated the various valves for operability concerns. The licensee has an on going evaluation program to address any additional valves that exhibit pressure locking or thermal binding.

2.7 Follow-up of Concerns Enumerated in the Part 1 Report

The concerns identified in the Part 1 report were reviewed to verify that the licensee had taken actions to improve, modify, or correct any deficiencies observed by the inspectors.

There was concern that certain MOVs that were practicable to test may not be in situ DP/Flow tested. The licensee is evaluating the possibility of grouping in lieu of dynamically testing each valve and is awaiting the results of the EPRI testing program. The inspectors reviewed the licensee's list of valves that were not practicable to dynamically test. The justification for each non-testable valve was examined by the inspectors and found technically sound and justified.

The licensee has not completely developed all the procedures necessary to support the MOV maintenance and testing program. The inspectors reviewed various parts of the maintenance and post maintenance testing procedures listed below:

QI 11-PTN-1, Test Control

QI 11-PTN-3, Post Maintenance Tests

O-ADM-701, Control of Maintenance and Constructions Work Activities

O-ADM-737, Post Maintenance Testing

Procedures did not require as-found data collection and trending information assimilation. Test procedures did not fully consider the intent of the 10 CFR 50 Appendix B criteria to verify the data collection process.

3. EXIT INTERVIEW

The inspection scope and findings were summarized on October 29, 1993 with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed in detail the inspection results. Proprietary information is not contained in this report. No dissenting comments were received from the licensee.

4. ACRONYMS AND INITIALISMS

AC	Alternating Current
AEOD	Office for Analysis & Evaluation of Operational Data
CS	Charging System
CST	Control Switch Trip
CT	Containment Spray System
DBD	Design Basis Document
D/P	Differential Pressure
EPRI	Electric Power Research Institute
FPL	Florida Power & Light
ft-lb	Foot Pounds
FSAR	Final Safety Analysis Report
GL	Generic Letter

INEL	Idaho National Engineering Laboratory
INPO	Institute of Nuclear Power Operations
MCC	Motor Control Center
MOV	Motor Operated Valve
NRC	Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation
PTN	Plant Turkey Point Nuclear
PWR	Pressurized Water Reactor
psid	Pounds Per Square Inch Differential
ROL	Rate of Loading
SOER	Significant Operating Experience Report
TI	Temporary Instruction
V	Volts
VDC	Volts Direct Current