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

Report Nos.: 50-325/85-14 and 50-324/85-14

Licensee: Carolina Power and Light Company
411 Fayetteville Street
Raleigh, NC 27602

Docket Nos.: 50-325 and 50-324 License Nos.: DPR-71 and DPR-62

Facility Name: Brunswick 1 and 2

Inspection Conducted: May 20-24, 1985

Inspectors: N. Merriweather 6-19-85
N. Merriweather, Team Leader Date Signed

N. Merriweather for 6-19-85
R. Pierson Date Signed

T.E. Conlon for 6-19-85
H. Whitcomb Date Signed

Consultant: P. M. Chan, Lawrence Livermore National Laboratory

Accompanying Personnel: T. E. Conlon

Approved by: T E Conlon 6-19-85
T. E. Conlon, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This special, announced inspection entailed 130 inspector-hours on site concerning licensee response to Generic Letter (GL) 83-28, Required Actions Based on Generic Implications of Salem Anticipated Transient Without Scram (ATWS) Events. Areas inspected included: post-trip review; equipment classification; vendor interface and manual control; surveillance and post-maintenance testing; and reactor trip system reliability.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*E. A. Bishop, Assistant to General Manager
*J. W. Chase, Manager - Operations
*J. D. E. Jeffries, Manager - Corporate Nuclear Safety
*L. E. Boyer, Director - Administrative Support
*M. A. Jones, Acting Director - Onsite Nuclear Safety
*J. O'Sullivan, Manager - Maintenance
*D. E. Quidley, Instrumentation and Control (I&C) Maintenance Representative
*J. W. Moyer, I&C Maintenance Supervisor
*R. E. Helme, Director of Onsite Nuclear Safety
*B. E. Hinkley, Manager - Technical Support
*M. Hogle, Engineering Supervisor - Technical Support
*M. Kesmodel, Document Control Supervisor
*K. E. Enzor, Director Regulatory Compliance
*J. Boone, Principal Engineer - Special Projects
*W. Leonard, Principal Engineer - Operations
D. Fasnacht, Principal Engineer - Licensing
W. Murray, Senior Engineer - Onsite Licensing
G. Eagle, Projects Engineer - Computer
D. Savage, Shift Foreman
M. Robinson, Document Control
*L. Jones, Director - Quality Assurance/Quality Control (QA/QC)
*R. Creech, I&C Maintenance Supervisor
*R. M. Rogers, Engineer - QA
W. Martin, Onsite Nuclear Safety
D. Phipps, Performance Engineer
G. Locklear, Q-List Coordinator
B. Parks, Engineering Supervisor
T. Mills, Procurement Engineer
I. Fermyduval, I&C Planner
M. S. Haynes, I&C Foreman
R. Drew, I&C Maintenance Engineer
P. Musser, Senior Engineer

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

Other Organizations

D. Musick, Engineer, General Electric Co.
W. Kassebaum, Engineering Consultant

NRC Resident Inspector

L. Garner, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on May 24, 1985, with those persons indicated in paragraph 1 above. The inspectors described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. The following new item was identified during this inspection:

Inspector Followup Item 325, 324/85-14-01, Q-List Program Changes, paragraph 7.

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

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Background

In February 1983, the Salem Nuclear Power Station experienced two failures of the reactor trip system upon the receipt of trip signals. These failures were attributed to Westinghouse - Type DB-50 reactor trip system (RTS) circuit breakers. The failures at Salem on February 22 and 25, 1983, were believed to have been caused by a binding action within the undervoltage trip attachment (UTVA) located inside the breaker cubicle. Due to problems of the circuit breakers at Salem and at other plants, NRC issued Generic Letter 83-28, Required Actions Based on Generic Implications of Salem ATWS Events, dated July 8, 1983. This letter required the licensees to respond on immediate-term actions to ensure reliability of the RTS. Actions to be performed included development of programs to provide for post-trip review, classification of equipment, vendor interface, post-maintenance testing, and RTS reliability improvements. The licensee responded to Generic Letter 83-28 by correspondence dated November 7, 1983. This inspection was performed to review the licensee's current program, planned program improvements, and implementation of present procedures associated with post-trip review, equipment classification, vendor interface, post-maintenance testing, and reactor trip system reliability for Brunswick Steam Electric Plant (BSEP) Units 1 and 2.

6. Post-Trip Review

The inspector reviewed the licensee's response to Generic Letter 83-28 which described their program for post-trip review. Their implementation of these guidelines was also evaluated. The post-trip review program is addressed and implemented by Operating Instruction: OI-22, Plant Incident And Post-trip Investigation.

The capability for assessing the sequence of events leading to a reactor trip is provided by the process computer, a Honeywell 4010. The process computer receives power from the uninterruptible power supply (UPS) system. The UPS System consists of a vital bus, a power switching module, and two power converter modules, each supplied by divisionalized emergency ac and dc sources. Each power converter module is capable of supplying the total UPS load. Only one power converter module is in service, with the other module in standby.

The process computer provides data points for two post-trip logs: (1) Nuclear Steam Supply System (NSSS) log which includes data points for Average Power Range Monitor, Generator Megawatts, Reactor Pressure, Core Power Recirculation Flow, Feedwater Flow A, Feedwater Flow B, Reactor Level, Steam Flow and Throttle Pressure and the (2) Balance of Plant (BOP) log which includes approximately 30 additional data points. The functions of the BOP programs are to monitor assigned BOP, to perform calculations, and to log plant performance variables not directly associated with the Nuclear Steam Supply System. The NSSS is set for one-second intervals for one minute prior to the SCRAM to one minute following the SCRAM. The BOP values are set for various intervals for approximately five minutes prior to the SCRAM to five minutes following the SCRAM depending upon the set-time interval. In addition, the computer provides for a sequence of events alarm log printout and provides control rod drive position. Strip charts from control room indicators are also utilized and are included in the Post-Trip report as specified in Attachment 1 of OI-22.

Operating Instruction: OI-22 clearly specifies the requirements for reviewing trip data. The qualifications, responsibilities and authority of the personnel responsible for performing the review and analysis are clearly delineated. Criteria for determining the acceptability of a plant restart conform with the guidelines as described in Generic Letter 83-28, and OI-22 adequately describes the methods and criteria for comparing the event information with known or expected plant behavior.

If the cause of the event is repetitive and requires more extensive action a mechanism exists for providing for an independent assessment of the event prior to conducting restart. If the cause of the trip cannot be determined, if a potential safety concern exists or if a specified system did not respond as required, reactor startup is prohibited until concurrence is obtained from the Plant Nuclear Safety Committee.

Interviews revealed that plant personnel preparing and/or reviewing the post-trip documentation were familiar with plant systems, equipment, and plant operation. Training had been performed and rescheduled periodically and the training records were being maintained.

The inspector reviewed six reactor SCRAMs which included Unit No. 1 SCRAMs on March 31, 1984, August 1, 1984 and January 24, 1985 and Unit No. 2 SCRAMs on February 22, 1984, October 24, 1984 and November 27, 1984. The packages appeared to be thorough and adequately documented the events. Documentation of corrective action was also included in those instances where it had been completed.

Site procedures provide for the identification of Plant Incident and Post-Trip Investigation reports and accompanying data as Quality Assurance (QA) records and for storage of these records in the proper location. The plant Incident and Post-Trip Investigation reports are placed in QA Documentation storage following completion of any procedure changes and required plant modifications and following completion of the senior plant management review.

Several instances were found where these documents were not placed in document control in a timely manner. For example, Post-Trip reviews of February 22, 1984, October 24, 1984, November 27, 1984 and January 24, 1985 are still in the custody of the Operations Engineer since corrective action has not been completed. However, following implementation of corrective action (in most cases these were procedural changes or modifications requiring a refueling outage) the package will be forwarded for QA Document Storage. However, the long time span for which these documents are not maintained under controlled storage conditions is potentially hazardous for document retention. The licensee acknowledged this concern and informed the inspectors that the procedure was being revised to have the reports reviewed in a more timely manner.

Onsite Nuclear Safety has developed computer software to facilitate graphical display of the process computer data points; however, the data points must still be manually inserted. This graphical analysis was performed by Onsite Nuclear Safety during their review of the SCRAM. This program has since been turned over to Operations to allow Operations to plot these graphs. Operations utilizes this graphic capability only during instances when the cause of the SCRAM is not immediately obvious or when subsequent analysis is required. For reactor SCRAMs from apparently known, easily diagnosed causes, graphing of the NSSS data points is not used. This presents potential problems as some phenomena may not be readily recognized unless graphical results are utilized. The licensee acknowledged this concern and agreed to review this matter further. The NRC inspector agreed with the licensee's approach and had no further concerns.

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

7. Equipment Classification

The licensee was requested in GL 83-28 to confirm that all components of the reactor trip system whose function is required to trip the reactor are identified as safety-related on documents, procedures, and information handling systems used in the plant to control safety-related activities, including maintenance, work orders, and parts replacement. In addition, the licensee was requested to describe their program for ensuring that all components of other safety-related systems necessary for accomplishing required safety functions are also identified as safety-related on information handling systems used at the plant. The licensee's response to Sections 2.1 and 2.2 of GL 83-28 gives a detailed description of the program and procedures for safety-related equipment classification. The inspector reviewed their response, appropriate procedures, and interviewed responsible licensee personnel to confirm that the licensee's program for equipment classification was adequate and consistent with their response to GL 83-28.

The inspector examined the following procedures and documents:

Maintenance Procedure MP-03, Calibration of Process Instruments, Revision 021

Maintenance Procedure MP-04, General Maintenance Procedure, Revision 011

Maintenance Procedure MP-10, Preventive Maintenance Program, Revision 025

Maintenance Procedure MP-14, Corrective Maintenance, Revision 029

Maintenance Procedure MP-16, Writing Corrective Maintenance Instructions

Volume XI, Book 2 Q-List, Revisions 26 and 27

Engineering Procedure ENP-3, Plant Modification Procedure

Engineering Procedure ENP-3.1, Direct Part Replacement, Revision 000,

Engineering Procedure ENP-12, Engineering Evaluation Procedure, Revision 009

Administrative Procedure AI-25, Procurement of Noncompany Labor and Services, Revision 008

Maintenance Instruction MI-10-19, C71/C72-K14A-G and C71/C72-K15A-D Relay Inspection, Revision 001

Storekeeper Instruction SK-01, Material Requisition and Reorder Procedures and Responsibilities, Revision 014

Brunswick Unit 2 Technical Specifications, Amendment 98

Work Requests and Authorizations Nos. 2-E-84-5771, 2-E-84-4926, 1-E-84-0082, 1-E-84-5751, 1-E-84-5755 and 1-E-84-5757

The inspector concluded through discussions with licensee personnel and by review of the above procedures and documents that the licensee's program for equipment classification included the following elements:

- Plant and component control for classification of structures, systems, and components as safety-related were being implemented.

- The licensee has developed a program to assure that safety-related or nonsafety-related maintenance activities are identified during the planning stage.

- Personnel participating in activities impacting safety-related or nonsafety-related structures, systems, and components were aware of the appropriate level of QA controls.

- Written directives assigned principal responsibility for satisfactory completion of procurement and maintenance activities associated with safety-related structures, systems and components.

- Personnel performing activities impacting equipment on the safety listing have received indoctrination and training.

- Repairs to equipment to correct failures, malfunctions, deficiencies, deviations, defective material, and nonconformances were performed, documented, and reviewed to determine reliability of replacement components.

Other details of the inspection are discussed below:

Volume XI, Book 2 of the Plant Operating Manual is the procedure used by the licensee to determine the safety classification of structures, systems and components at Brunswick units 1 and 2. The Q-list identifies, in tables, the portions of systems, the instruments, and the special components of systems which are safety-related (Q-list). The licensee uses the Q-list procedure to identify those activities (such as maintenance, design and procurement) which are considered safety-related and governed by the requirements of the corporate Quality Assurance Program. The procedure does not identify all safety-related components and sub-components; however, it delineates general criteria for the proper classification of all safety-related components and sub-components.

The Q-list is part of the Plant Operating Manual and is a controlled document. It is the responsibility of the Q-List Group-Technical Support Unit to maintain and revise the Q-List. Any revisions to the Q-List are required to have a safety analysis, two-party technical and safety review and approval by the Plant General Manager; however, in cases where an unreviewed safety question exist, as defined in 10 CFR 50.59, approval is also required by the Plant Nuclear Safety Committee prior to implementation. This is delineated by Technical Specifications.

In addition to the Q-List procedure described above, the licensee is currently developing a computerized equipment data base (EDB) system that will upgrade the Q-List. This EDB will be a detailed listing of components, sub-components and parts. The licensee expects to have all safety-related systems entered into the EDB by the end of July 1985 and all data fields validated and classification determinations made on safety-related components by December 1986.

The inspector discussed with cognizant licensee personnel their procedures for processing work requests and authorizations, purchase requisitions, purchase orders, and design modifications. Discussions with licensee personnel in the Q-List Group revealed the following concerns:

a. The Q-List Group has been classifying as Q or Non-Q, piece parts of major plant components and documenting the results of their evaluations on three part memorandums. These evaluations are used by plant staff in classifying as Q or non-Q replacement components on maintenance and procurement requests; however, this evaluation is not procedurally addressed by the licensee. The inspector informed the licensee that the evaluations of piece parts could possibly effect the Q-List and should be controlled by some procedure. The licensee acknowledged this concern and committed to revise Volume XI, Book 2, Q-List to incorporate steps for processing component parts evaluations. The licensee indicated that the procedure would require that each evaluation receives independent reviews and a safety evaluation prior to approval and implementation.

b. Engineering procedure ENP-12 is the procedure used for upgrading parts to Q-List. This procedure is also used to downgrade components identified in the Q-List. Procedure ENP-12 has a required distribution for the completed evaluations. However, the completed Engineering Evaluation Report is not routed to the Q-List Group who has responsibility for revising the Q-List. The licensee indicated that although the Q-List Group is not on the required distribution they have been receiving copies of Engineering Evaluation Reports. However, the licensee indicated that procedure ENP-12 would be revised to include the Q-List Group on the distribution list.

The above concerns were identified to the licensee as Inspector Followup Item 325, 324/85-14-01, Q-List Program Changes.

The inspector also reviewed records for six completed Work Requests and Authorization Forms. The records were examined to verify that the work had been properly classified per the Q-List, that all required reviews and approvals were received prior to performing work, and that appropriate post maintenance testing was conducted prior to returning the component back to service.

The records reviewed are identified as follows:

WRAF	System
2-E-84-5771	RPS
2-E-84-4926	RPS
1-E-84-0082	RPS
1-E-84-5751	CRD
1-E-84-5755	CRD

The records indicated that all reviews and approvals were received prior to beginning work, forms were properly classified as Q-List, appropriate post maintenance testing was conducted, and finally records were reviewed and transferred to the storage facility.

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

8. Vendor Interface and Manual Control

The inspector reviewed the licensee's response which described their program for vendor interface and control of vendor technical information. Their response described the following program:

> CP&L is supporting the INPO Nuclear Utility Task Action Committee (NUTAC) on NRC Generic Letter 83-28, which is currently focusing on industry-wide vendor information programs for safety-related equipment vendors other than NSSS vendors. We believe this program will provide, when implemented, a practical industry-wide approach to assuring safety-related equipment reliability.
>
> BSEP has in place a vendor interface program which provides for the evaluation of vendor information associated with safety-related components and the subsequent incorporation into plant instructions and procedures as appropriate. The vendor interface process, in combination with other plant and industry programs, provides assurance of the reliability of safety-related components commensurate with the safety functions.

Existing vendor interface process features include:

- Control of vendor manuals supplied with original plant equipment and with equipment installed as a result of design changes (RMI-01: Capture and Indexing of Correspondence and Plant Records; and RMI-03: Reproduction, Distribution, and Accountability of Plant Documents).

- Use of vendor information in developing self-sufficient approved and controlled technical maintenance instructions (MP-16; Writing Corrective Maintenance Instructions).

- Evaluation of vendor recommendations (PPP-02; Vendor Recommendation Processing).

In summary, the licensee states that the vendor interface processes and the regulatory and industry notifications, in combination with BSEP's commitment to equipment preventive maintenance, surveillance testing, equipment corrective maintenance, and the quality assurance program, provide assurance of safety-related component reliability. This obviates the need for development of additional formal programs of periodic vendor contact or acknowledgement of feedback for other than the NSSS vendor. For safety-related equipment vendors who have gone out of business or will not supply information, such formal vendor contact programs would serve no purpose. Thus, the licensee does not plan to implement additional formal programs for periodic vendor contact or acknowledgement of feedback for other than the NSSS vendor. The licensee further states that the BSEP program provides assurance of safety-related equipment reliability and cost-effective safety enhancement.

The inspector reviewed licensee procedures, vendor manuals and other documentation and activities concerning safety-related components to determine if adequate controls have been developed and are being implemented as required by Technical Specifications, industry guides and standards, regulatory requirements and CP&Ls response (dated November 7, 1983) to Generic Letter 83-28. The review revealed that the procedures were consistent with the licensee's submittal. The following documents were reviewed during this inspection:

PPP-002, Vendor Recommendation Processing, Revision 3, dated 9/19/84

RMI-003, Reproduction, Distribution, and Accountability of Plant Documents, Revision 20, dated 1/16/85

MP-10, Preventive Maintenance Program, Revision 25, dated August 29, 1984

MP-16, Writing Corrective Maintenance Instructions, Revision 10, dated May 2, 1984

MP-43, Maintenance Subunit Action/Commitment Items Tracking System, Revision 0, dated January 25, 1984

AI-02, Feedback of Operating Experience, Revision 21, dated May 19, 1983

AI-25, Procurement of Noncompany Labor and Services, Revision 8, dated March 22, 1985

AI-72, Control/Approval of Vendor Technical Manuals, Revision 0, dated May 5, 1985

AP-01, Administrative Procedures, Revision 94, dated May 7, 1985

OI-25, Operations Action Items Tracking System, Revision 0, dated January 25, 1984

ENP-20, Engineering Work Request (EWR), Revision 3, dated August 17, 1984

1985 Annual Vendor Recommendation Status Report, dated March 18, 1985, BSEP 85-0256

Vendor Recommendation Status Report, dated May 7, 1985, BSEP 85-0885

BSEP SIL Report, dated April 23, 1985

BSEP SAL Report, dated April 23, 1985

BSEP FDI Status Report, dated April 23, 1985

Engineering Work Request 84-385 For GE SIL-407, Preventing Unauthorized Control Rod Patterns, closed out on April 4, 1985

Engineering Work Request 83-136 For GE SIL-390, Modification of Invessel Rack Cable Assemblies, closed out on December 13, 1983

Quarterly Component Failure Report - Failures Through the Third Quarter 1984, dated January 18, 1985

Quarterly Component Failure Report - Failures Through the Fourth Quarter 1984

Through examination of the above documents, interviews with plant personnel and observation of activities in progress, the inspector concluded that vendor interface commitments expressed in the licensee's response to Generic Letter 83-28 were being implemented and appear to be progressing satisfactorily. In their response, the licensee estimated that completion of its commitments would occur in the December 1985 timeframe. Based on the progress observed and through various discussions with personnel responsible for vendor interface activities, delays in fully implementing all commitments by this time are not anticipated. The licensee has already responded to and resolved the majority of General Electric (NSSS vendor) Service Information Letters (SILs), Service Advice Letters (SALs), Technical Information Letters (TILs) and Field Disposition Information (FDIs). It is the licensee's intent to review and implement as necessary all applicable vendor recommendations or provide justification for not implementing such recommendations.

All incoming vendor manuals and correspondence is screened and controlled by the plant document control. A program has been established which alerts the affected organizations that the vendor manuals have been revised and that revisions to plant procedures and documents may be required. Department tracking systems have been established to track the progress of required action.

The inspector reviewed several vendor recommendations and manual revisions and determined that the program was being implemented in accordance with established procedures and commitments.

The inspector also reviewed licensee's progress in incorporating vendor recommendations into maintenance procedures to verify that the licensee would meet the estimated completion dates specified in Appendix C to their response.

The licensee contracted with General Electric (GE) Company to secure and evaluate vendor recommendations regarding testing and maintenance of safety related components at Brunswick. In October 1984 GE mailed about 150 letters to Q-List vendors and received about 120 responses. This resulted in a GE transmittal of five vendor recommendations to the licensee's document control. The five vendor recommendations were held at licensee's document control for about six weeks for no practical reason. During this inspection the licensee's document control unit began to get ready to transmit the five vendor recommendations to the appropriate disciplines for review and incorporation into the maintenance procedures. At the exit interview, the licensee responded that the six weeks delay was due to impending issuance of Administrative Instruction AI-72, "Control/Approval of Vendor Technical Manuals." The inspector noted that Revision 000 of AI-72 was issued on May 5, 1985 and the licensee was on target with meeting their commitment as stated in their response to GL 83-28.

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

9. Surveillance and Post-Maintenance Testing

a. Licensee's Procedures and Documents Reviewed

(1) Maintenance Procedure: MP-10, Preventive Maintenance Program, Rev. 025

(2) Maintenance Procedures: MP-14, Corrective Maintenance, Rev. 029

(3) Administrative Instruction: AI-33, Surveillance Test Cross Reference to the Technical Specifications

(4) Engineering Procedure: ENP-16, Procedure for Administrative Control of Inservice Inspection Activities

(5) Maintenance Surveillance Test: 2MST-RPS 24M, RPS Reactor Vessel Low Water Level (LL1) Trip Unit Channel Calibration

(6) Maintenance Instruction: MI-10-19, C71/C72-K14A-G and C71/C72-K15A-D Relay Inspection, Rev. 001

(7) General Maintenance Procedure: MP-04, Rev. 011

(8) Administrative Instruction: AI-02, Feedback of Operating Experience, Rev. 021

(9) Maintenance Procedure: MP-26, Loop Calibrations, Rev. 006

(10) Administrative Instruction: AI-25, Procurement of Noncompany Labor and Services, Rev. 008

(11) Periodic Test: PT-01.1.10-1, Reactor Protection Logic System Functional Test, Rev. 0

(12) Regulatory Compliance Instruction: RCI-02.5, Surveillance Test Cross Reference to Technical Specifications, Rev. 6

(13) Administrative Procedures, Vol. I, Book 1, pages 1 & 2

(14) Administrative Instruction: AI-72, Control/Approval of Vendor Technical Manuals, Rev. 000, dated May 5, 1985

(15) Records Management Instruction: RMI-3, Reproduction, Distri bution, and Accountability of Plant Documents, Rev. 021, dated April 30, 1985

b. Surveillance Testing

The inspector observed the performance of Maintenance Surveillance Test No. 2MST-RPS 24M, RPS Reactor Vessel Low Water Level (LL1) Trip Unit Channel Calibration. This procedure is performed on each Brunswick unit on a monthly basis. The entire procedure is performed by two I&C technicians and takes about two hours. The test simulates a low water level signal to the Primary Containment Isolation System (PCIS) and provides a half-scram signal to the Reactor Protection System (RPS) logic. This is done on each of the four channels A1, B1, A2, and B2. The test verifies the operability of the reactor vessel low water level trip function of the PCIS and the RPS. The inspector noted that the I&C technicians performing the test followed the procedure carefully, and performed all the steps correctly. The inspector noted, however, that the procedure 2MST-RPS 24M (M for monthly) was specifically written for Unit 2 and that a corresponding procedure 1MST-RPS 24M would be used for Unit 1. The inspector noted that the unit designator on all the panel alarm windows throughout the entire procedure was omitted. To illustrate as an example, the inspector noted that paragraph 7.2.2.1 of 2MST-RPS 24M calls for the test technician to verify a clear status on window (A-04 5-1). This would be Alarm Panel 04, row 5, column 1. However, the inspector noted that the actual designations on the seven control room alarm panels themselves were different.

A comparison of the alarm panel designations is tabulated below:

	On Panel	On Procedure
Brunswick Unit 1	1-A-4	A-4
Brunswick Unit 2	2-A-4	A-04

There are two obvious inconsistencies:

(1) The unit designator "1" or "2" is shown in the panel version, but it is not shown in the procedure version.

(2) Two digits are used to specify the Alarm Panel Number "04" in the procedure version, whereas only one digit is used in the panel version.

In the course of performing the entire MST procedure, the test technicians went back and forth from the test area to the control room area to verify the status of approximately 100 windows. The inspector pointed out to the licensee that the discrepancies in the alarm panel designations on the panel and in the procedure can lead to errors in verification. This can be as a result of the large number of comparisons that have to be made.

The inspector conferred with the licensee's engineers responsible for implementing the Maintenance Surveillance Test (MST) Procedure System. The licensee's engineers' response was that they are in the process of converting approximately 230 Periodic Test (PTs) Procedures to approximately 400 MSTs. The plan is to delete most of the PTs that were written for Unit 0, which meant for both units 1 and 2. The MSTs would be written for the same test: one for Unit 1 and the other for Unit 2. On each page of the MST is printed the unit number. The lack of a unit designator in the alarm panel designation was due to the decision to follow the licensee's Writer's Guide for MST. Section 3.7.1, page A1-12 of the Writer's Guide showed an example where the unit designators for valves were omitted in the procedure. This approach was similarly applied to alarm panels on page A1-13. The end result was a saving in having to repetitiously show the unit designator on all equipment numbers.

c. Post-Maintenance Testing

(1) Review of Completed Work Packages

The inspector reviewed the licensee's maintenance and post-maintenance testing records. The inspector randomly selected six of the licensee's Work Request and Authorization Forms (WRAF) and reviewed all the information and data in each work package. The inspector found all the work packages complete, and all minor discrepancies were adequately addressed by the licensee's personnel. The WRAFs audited by the inspector were as follows:

	WRAF No.	Description
(a)	2E-83-3709 No discrepancies were identified.	MSL Rad Monitor D, Unit 2
(b)	1E-83-1334 No discrepancies were identified.	RPS MG Set Output Breaker
(c)	1M-83-1817 No discrepancies were identified.	Core Spray System Valve Repack
(d)	1E-83-061 No discrepancies were identified.	Replace Relay Coil
(e)	1E-82-3970	Electrical Support Work on Valve Maintenance

The inspector noted that the Post Maintenance Testing Requirement (PMTR) was signed off on 7-18-83 as satisfactory. However, contradictory information was noted in the Job Supplement Form of the WRAF. The Job Supplement Form stated that the post maintenance test was unsatisfactory on the same date: 7-18-83. The inspector questioned several licensee personnel about this discrepancy and concluded that the entry on the Job Supplement Form, which stated that the tests were unsatisfactory, was made approximately four to five weeks prior to the 7-18-83 date shown on the form. Apparently, the valve in question was subjected to a series of test in early June 1983 and the valve failed those tests. This led to additional maintenance work and resulted in another series of tests which culminated in the acceptance on 7-18-83. The inspector pointed out to the licensee that the records associated with this WRAF were not clear and can lead to confusion unless time was spent fitting the pieces together.

(f) 2E-84-4365 — Repair V120 Throttle Valve

The inspector noted that item #39 "Clearance Required" was not checked off on the WRAF. The licensee responded that this was an oversight, and submitted proof of adequate work procedure on this WRAF.

(2) RPS Relay Inspection

The inspector participated in observing the licensee's I&C Group performing a demonstration of RPS relay inspection using Maintenance Instruction MI-10-19. The licensee's demonstration went

well. However, there was an apparent typographical error in the subject Maintenance Instruction MI-10-19. On page 1 of 5 in the "References" section, the General Electric product information was referred to as "GEH-2416C". A search of the licensee's Document Control showed that the vault copy was a "GEH-2416B". Further search by the licensee revealed that no revision "C" existed. The licensee committed to have the error corrected in the next revision to Maintenance Instruction MI-10-19.

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

10. Surveillance Testing of the Diverse Reactor Trip Functions of the Reactor Trip System

The licensee states in their response to GL 83-28 that on-line testing of the Reactor Protection System is accomplished by periodic functional channel tests, channel checks, and scram timing of control rods. The licensee also states that on-line testing of the backup scram solenoid valves is not possible without scramming the plant; however, testing of the backup scram valves will be performed during each refueling outage. The inspector confirmed that the licensee's surveillance procedures PT-01.1.10-1/2 independently test each backup scram solenoid valve once every 18 months while the plant is shutdown.

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