



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

Report Nos.: 50-424/85-48 and 50-425/85-35

Licensee: Georgia Power Company
P.O. Box 4545
Atlanta, GA 30302

Docket Nos.: 50-424 and 50-425

License Nos.: CPPR-108 and CPPR-109

Facility Name: Vogtle 1 and 2

Inspection Conducted: September 27 - October 31, 1985

Inspectors: W. H. Rankin Nov. 14, 1985
for H. H. Livermore, Senior Resident
Inspector, Construction Date Signed

W. H. Rankin Nov. 14, 1985
for J. F. Rogge, Senior Resident
Inspector, Operations Date Signed

W. H. Rankin Nov. 14, 1985
for R. J. Schepens, Resident
Inspector, Construction Date Signed

Approved By: M. V. Sinkule 11/14/85
M. V. Sinkule, Section Chief
Division of Reactor Projects Date Signed

SUMMARY

Scope: This routine, unannounced inspection entailed 245 Resident inspection hours on site (24 hours were on backshifts) inspecting: containment and safety-related structures, piping systems and supports, safety-related components, auxiliary systems, electrical equipment and cables, instrumentation, quality programs and administrative controls affecting quality, preoperational test program implementation and verification, and follow-up on previous inspection identified items.

Results: No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

*D. O. Foster, Vice President and Project General Manager
 P. D. Rice, Vice President and General Manager, Q.A.
 *W. T. Nickerson, Deputy Project General Manager
 D. G. Smith, Assistant Deputy Project General Manager
 W. C. Ramsey, Readiness Review Manager
 *H. H. Gregory III, General Manager Nuclear Construction
 M. H. Gouge, Project Construction Manager
 G. Bockhold, Jr., General Manager Nuclear Operations
 O. Batum, General Manager Engineering and Licensing
 *C. W. Hayes, Vogtle Quality Assurance Manager
 *C. E. Belflower, Quality Assurance Site Manager - Operations
 *E. D. Groover, Quality Assurance Site Manager - Construction
 S. D. Haltom, Quality Assurance Engineering Support Supervisor
 W. E. Mundy, Quality Assurance Audit Supervisor
 J. E. Sanders, Project Construction Manager - Unit 1
 D. M. Fiquett, Project Construction Manager - Unit 2
 *B. C. Harbin, Manager Quality Control
 C. R. Brewer, Assistant Quality Control Manager
 T. L. Weatherspoon, Assistant Quality Control Manager
 G. A. McCarley, Project Compliance Coordinator
 W. C. Gabbard, Assistant Project Compliance Coordinator
 J. O. Dorrough, Administrative Manager
 W. F. Kitchens, Operations Superintendent
 P. T. Ciccanesi, Regulatory Compliance
 T. Dannemiller, Senior QA Engineer
 R. C. Walker, Quality Assurance Field Representative
 G. C. Lapsley, Quality Control - Mechanical
 *J. F. D'Amico, Regulatory Compliance Superintendent
 C. W. Joyner, Jr., Quality Control Construction
 J. G. Adkins, Civil Engineering - Southern Company Services
 *H. W. Swain, Mechanical QC Section Supervisor

Other licensee employees contacted included craftsmen, technicians, supervision, engineers, inspectors, and office personnel.

Other Organizations

*J. Mamon, Quality Engineer - Bechtel
 H. M. Handfinger, Preoperational Test Superintendent - Bechtel
 M. L. Bagale, QA Surveillance Specialist - Bechtel
 B. F. Hurless, QA Surveillance Specialist - Bechtel
 S. S. Pietrzyk, Assistant Project Engineer - Bechtel
 R. Johnson, Discipline Group Supervisor, Electrical - Bechtel

G. Reardon, Pullman-Kenith Fortson - Welding
 G. Singer, Pullman-Kenith Fortson - Welding
 A. F. Raatz, Vice President - American Welding Society

*Attended Exit Interview

2. Exit Interview (30703C)

The inspection scope and findings were summarized on October 31, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection finding listed below. No dissenting comments were received from the licensee. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

(Closed) Inspector Followup Item, 50-424/85-37-03 "Review Licensee Action On QA Surveillance Report Finding No. 85-016-BJ"- Paragraph 3.

The following NRC exit interviews were attended during the inspection period by a resident inspector:

<u>Date</u>	<u>Inspector</u>
September 30, 1985	R. W. Newsome
October 4, 1985	F. R. McCoy
October 18, 1985	T. D. Gibbons

3. Licensee Action on Previous Inspection Items (92702)

(Closed) Inspector Followup Item, 50-424/85-37-03 "Review Licensee Action On QA Surveillance Report Finding No. 85-016-BJ." The inspector has reviewed Georgia Power Company's (GPC) corrective action for surveillance finding No. 85-016-BJ, dated 8/6/85 and has determined that the finding has been acceptably addressed.

The inspector verified that SUM-16 was revised to provide specific direction with respect to the inclusion of design or other velocity in flush procedures. Also, that Change Request #04 issued against Procedure 1-1BJ-02 (Safety Injection Pump Discharge Piping Flush) incorporated the design velocity requirements. The licensee also reviewed all active flush procedures to assure compliance to the new requirements contained in Revision 5 of SUM-16.

4. Unresolved Items (92701)

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations. Unresolved items were not identified during this inspection.

5. Construction Inspection - Units 1 & 2

Periodic inspections were made throughout this reporting period in the form of general type inspections in different areas of both facilities. The areas were selected on the basis of the scheduled activities and were varied to provide wide coverage. Observations were made of activities in progress to note defective items or items of noncompliance with the required codes and regulatory requirements. On these inspections, particular note was made of the presence of quality control inspectors, supervisors, and quality control evidence in the form of available process sheets, drawings, material identification, material protection, performance of tests, and housekeeping. The inspections were performed in the containment buildings, auxiliary building, control building, and storage areas.

Interviews were made with craft personnel, supervisors, coordinators, quality control inspectors, and others as they were available in the work areas.

The inspector reviewed numerous deviation reports to determine if requirements were met in the areas of documentation, approvals evaluation, justification, and corrective action.

The Resident Inspectors attended and audited the licensees training session on October 22, 1985, for Quality Control Welding Inspectors concerning the training manual for inspectors of structural welds at nuclear power plants using the acceptance criteria of NCIQ-01. This covered the visual weld acceptance criteria for structural welding at nuclear power plants (Appendix VC, Rev. 10).

During this inspection, the inspector observed work in progress associated with the steam generator J-nozzle modification being accomplished by Westinghouse Electric Corporation on Unit 1 and 2 steam generators. This modification consists of replacing existing carbon steel J-nozzles in the feedwater distribution ring with Inconel J-nozzles for improved erosion-corrosion resistance. The feedwater distribution ring J-nozzle assembly is classified Safety Class II. The feedwater ring assembly is not part of the pressure vessel boundary. The inspector examined in process work on steam generator No. 2 in Unit 1 and No. 1 in Unit 2. The inspector inspected fitups in process welding and completed welds on several nozzles.

No violations or deviations were identified.

6. Fire Prevention/Protection and Housekeeping Measures - Units 1 & 2 (42051C)

The inspector observed fire prevention/protection measures throughout the inspection period. Welders were using welding permits with fire watches and extinguishers. Post indicator valves were being maintained in the open position. Fire fighting equipment is in its designated areas throughout the plant.

The inspector reviewed and examined implementation portions of the following procedures pertaining to the fire prevention/protection measures and housekeeping measures to determine whether they comply with applicable codes, standards, NRC Regulatory Guides and licensee commitments.

- SD-T-05, Rev. 6 Fire-Protection Equipment Inspection and Testing
- GD-T-15, Rev. 5 Welding and Cutting
- GD-T-17, Rev. 3 Housekeeping

The inspector observed fire prevention/protection measures in work areas containing safety related equipment during the inspection period to verify the following:

- Combustible waste material and rubbish was removed from the work areas as rapidly as practicable to avoid unnecessary accumulation of combustibles
- Flammable liquids are stored in appropriate containers and in designated areas throughout the plant
- Cutting and welding operations in progress have been authorized by an appropriate permit, combustibles have been moved away or safely covered, and a fire watch and extinguisher was posted as required
- Fire protection/suppression equipment was provided and controlled in accordance with applicable requirements

No violations or deviations were identified.

7. Containment (Structural Concrete) - Unit 2 (47053C)

a. Procedure and Document Review

The inspector reviewed and examined implementation portions of the following procedures pertaining to the placement of concrete to determine whether they comply with applicable codes, standards, NRC Regulatory Guides and license commitments.

- CD-T-02, Rev. 15 Concrete Quality Control
- CD-T-06, Rev. 9 Rebar and Cadweld Quality Control
- CD-T-07, Rev. 8 Embed Installation and Inspection
- CD-T-20, Rev. 6 Installation and Inspection of Trumpets, Rigid Extensions, and Duct Sheathing

b. Installation Activities

The inspector witnessed portions of the concrete placement indicated below to verify the following:

- (1) Forms, Embedment, and Reinforcing Steel Installation

- Forms were properly placed, secure, leak tight and clean.
- Rebar and other embedment installation was installed in accordance with construction specifications and drawings, secured, free of concrete and excessive rust, specified distance from forms, proper on-site rebar bending (where applicable) and clearances consistent with aggregate size.

(2) Delivery, Placement and Curing

- Preplacement inspection was completed and approved prior to placement utilizing a Pour Card (Exhibit CD-T-02*18).
- Construction joint*s were prepared as specified.
- Proper mix was specified and delivered.
- Temperature control of the mix, mating surfaces, and ambient were monitored.
- Testing at placement location was properly performed in accordance with the acceptance criteria and recorded on a Concrete Placement Pour Log (Exhibit CD-T-02*20).
- Adequate crew, equipment and techniques were utilized.
- Inspections during the placement were conducted by qualified personnel.
- Curing temperature was monitored.

<u>Pour No.</u>	<u>Location</u>	<u>Inspection Activity</u>
2-071-004B	Diesel Generator Building North - Center Quadrant Walls	Placement

Periodic inspections were conducted of the containment dome reinforcing steel and tendon sheathing installation and the diesel generator building walls (Train "A" North & West walls and Center-South half wall) reinforcing steel & embedment installation to determine that the requirements of applicable specifications, codes, standards, work performance procedures and inspection (QC) procedures were being followed.

No violations or deviations were identified.

8. Containment (Prestressing) - Unit 1 (47063C)

a. Procedure and Document Review

The inspector reviewed and examined implementation portions of the following specification, procedure, and quality assurance manual pertaining to the installation of horizontal tendons, to determine whether they comply with applicable codes, standards, NRC Regulatory Guides and licensee commitments.

- AX2AF04-100-12 Field Instruction Manual for Installation of VSL E5-55 Post-Tensioning System Within Nuclear Containment Structures, Rev. 9
- 1X2AF04-50-5 Horizontal Tendon Elevation-Unit 1 Buttress #1 to #2
- 1X2AF04-51-4 Horizontal Tendon Elevation-Unit 1 Buttress #3 to #1
- 1X2AF04-52-3 Horizontal Tendon Elevation-Unit 1 Buttress #2 to #3
- AX2AF04-78-4 Horizontal Tendon Stressing Data
- AX2AF04-79-4 Horizontal Tendon Stressing Data

b. Installation Activities

The inspector witnessed portions of the installation activities indicated below to verify the following:

- The latest issue (revision) of applicable drawings or procedures are available to the installers and were being used.
- Tendons were free of nicks, kinks, corrosion; were installed in designated locations; and that the installation sequence and technique was per specified requirements.
- Installation crew was properly trained and qualified.
- QC inspection was properly performed by qualified personnel in accordance with applicable requirements.
- Adequate protective measures were being taken to ensure mechanical and corrosion protection during storage, handling, installation, and post installation.
- Tendons were stressed in the proper sequence.

- All strands in the tendon were moving together during the stressing and the tendon is being stressed from both ends simultaneously.
- Elongation measurements were being taken properly and being compared to the calculated elongation.
- Anchorhead lift-off force was being taken and documented properly.
- The stressing operation was being monitored to identify any strand slippage.

The following tendons were observed:

<u>Horizontal Tendon No.</u>	<u>From Buttress to Buttress</u>	<u>Sequence No.</u>	<u>Activity</u>
33	3 West-2 West	6	Elongation Measurement
37	1 North-3 East	7	Stressing
38	2 West-1 South	7	Stressing Ram Installation
43	3 East	8	Anchor Head Installation
1	1 North	1	Grease Cap Installation
31	1 North	6	Grease Cap Installation

No violations or deviations were identified.

9. Containment (Steel Structures and Supports) - Units 1 & 2 (48053C)

Periodic inspections were conducted to observe containment steel and support installation activities in progress, to verify the following:

- Components were being properly handled.
- Specified clearances were being maintained.
- Edge finishes and hole sizes were within tolerances.
- Control, marking, protection and segregation were maintained during storage.

- Fit-up/alignment meets the tolerances in the specifications and drawings.

No violations or deviations were identified.

10. Safety-Related Structures (Structural Steel and Supports) - Units 1 & 2 (48063C)

Periodic inspections were conducted to observe construction activities of safety-related structures/equipment supports for major equipment outside the containment to verify that:

- Materials and components were being properly handled to prevent damage.
- Fit-up/alignment were within tolerances in specifications and drawing requirements.
- Specified clearances from adjacent components were being met.

No violations or deviations were identified.

11. Safety-Related Piping - Unit 1 (49063C) (337301)

During the inspection period, pipe run walkdowns were performed where piping installation is near completion to determine whether the piping run is installed as shown on current, approved drawings and in accordance with applicable construction specifications. Specific pipe run walkdowns included a walkdown of portions of the following lines listed below:

<u>P&ID No./Revision</u>	<u>Pipe Run Inspected</u>
1X4DB159-1, Rev. 17	Steam Generator No's. 3 & 4 Connections and Main Steam Lines
1X4DB159-2, Rev. 14	Steam Generator No's. 1, 2, 3, & 4 Main Lines
1X4DB159-3, Rev. 11	Steam Generator No's. 1 & 2 Connections and Main Steam Lines
1X4DB168-3, Rev. 15	Steam Generator No's. 1 & 4 Main Feedwater Line
1X4DB161-2, Rev. 14	Steam Generator No's. 1 & 4 Auxiliary Feedwater Supply Line

Specific areas examined during the pipe run walkdown for compliance with the applicable drawings and the plant design and Instrumentation Construction Specification No. X4AZ01 were as follows:

- Vent and Drain Connections and Locations
- Instrumentation Connections and Locations
- Valve Installation and Orientation
- Line Size and Location
- Fittings Type and Size
- Pipe/Valve/Fitting/End Connections
- Hanger Locations and Types

No violations or deviations were identified.

12. Reactor Vessel Protection - Unit 1 & 2 (50053C)

The Unit No. 1 inspection consisted of examination of the Reactor Vessel installed in containment to determine that proper storage protection practices were in place and that entry of foreign objects and debris was prevented.

The Unit No. 2 inspection consisted of examination of the Reactor Vessel installed in containment to determine that proper storage protection practices were in place and that entry of foreign objects and debris was prevented.

No violations or deviations were identified.

13. Reactor Vessel Integrated Head Package - Unit 1 & 2 (50053C)

The Unit No. 1 inspection consisted of examination of the integrated head package stored on the refueling floor in its designated laydown area to determine that proper storage protection practices were in place, entry of foreign objects and debris was prevented, and that access was controlled.

The Unit No. 2 inspection consisted of examination of the Reactor Vessel head with the installed control rod drive mechanisms on the refueling floor in its designated laydown area. During the assembly of the integrated head package, proper storage protection practices were observed to be in place and maintained during the performance of this work.

No violations or deviations were identified.

14. Reactor Vessel Internals - Unit 1 (50063C)

Periodic inspections were conducted during the inspection period when the upper and lower internals were stored in their designated storage area to determine that proper storage protection practices were in place, entry of foreign objects and debris was prevented and that access was controlled.

No violations or deviations were identified.

15. Safety-Related Components - Units 1 & 2 (50073C)

The inspection consisted of plant tours to observe protection of installed components to determine that adequate protection from dirt, dust, debris, water, or adjacent construction activities were in place.

Unit 1 equipment examined included:

- Residual Heat Removal (RHR) Pumps
- Diesel Generators
- Containment Spray (CS) Pumps
- Pressurizer
- Main Coolant Pumps
- Steam Generators
- Safety Injection Pumps
- Auxiliary Component Cooling Water (ACCW) Heat Exchangers
- Component Cooling Water (CCW) Heat Exchangers
- ACCW & CCW Pumps
- Cable Spreading Room Train A & B
- Accumulator Tanks
- Reactor Coolant Drain Tank Pumps
- Chemical and Volume Control System (CVCS) Letdown Heat Exchanger
- Reactor Coolant Drain Tank & Heat Exchanger
- Reactor Cavity Pumps
- Battery & Charger Rooms Train A, B, C & D
- Nuclear Grade Piping, Valves & Fittings
- Spent Fuel Pool Heat Exchangers
- Pressurizer Relief Tank
- Nuclear Service Cooling Water (NSCW) Pumps
- CVCS Centrifugal Charging Pumps & Positive Displacement Pump

Unit 2 equipment examined included:

- RHR Pumps
- CS Pumps
- CVCS Centrifugal Charging Pumps & Positive Displacement Pump
- Steam Generators
- Safety Injection Pumps Train A & B
- ACCW Heat Exchangers
- CCW Surge Tank
- ACCW & CCW Pumps
- Accumulator Tanks
- Pressurizer Relief Tank
- Diesel Generator Fuel Oil Tanks

An inspection was conducted of the equipment maintenance storage listing (EMSL) program records for the below listed safety-related pump motors. The purpose of this inspection was to verify that the EMSL maintenance report cards for the below selected equipment was stored in the vault and that the required inspections/preventative maintenance had been performed and

properly documented. The inspector reviewed the following EMSL maintenance report cards:

<u>Equipment Tag No.</u>	<u>Description</u>
1-1203-P4-001-M01	Component Cooling Water Pump Motor
1-1203-P4-003-M01	Component Cooling Water Pump Motor
1-1205-P6-002-M01	Residual Heat Removal Pump Motor Train "B"
1-1206-P6-001-M01	Containment Spray Pump Motor Train "A"
1-1206-P6-002-M01	Containment Spray Pump Motor Train "B"
1-1208-P6-001-M01	Chemical Volume Control System Positive Displacement Pump Motor
1-1208-P6-002-M01	Chemical Volume Control System Charging Pump Motor Train "A"
1-1208-P6-003-M01	Chemical Volume Control System Charging Train "B"
2-1204-P6-003-M01	Safety Injection Pump Motor Train "A"
2-1204-P6-004-M01	Safety Injection Pump Motor Train "B"
2-1205-P6-001-M01	Residual Heat Removal Pump Motor Train "A"
2-1205-P6-002-M01	Residual Heat Removal Pump Motor Train "B"
2-1206-P6-001-M01	Containment Spray Pump Motor Train "A"
2-1206-P6-002-M01	Containment Spray Pump Motor Train "B"
2-1208-P6-001-M01	Chemical Volume Control System Positive Displacement Pump Motor
2-1208-P6-002-M01	Chemical Volume Control System Pump Motor Train "A"
2-1208-P6-003-M01	Chemical Volume Control System Pump Motor Train "B"
2-1217-P4-002-M01	Auxiliary Component Cooling Water Pump Motor

The inspector noted that each of the above EMSL cards reflected that a deviation notice No. M02729 was written on May 24, 1984, which documented discrepancies with the above motors such as oil leaking from around sight glass or drain plug and oil levels in upper and lower motor bearings either high or low. Again on November 1, 1984, it was documented that another deviation notice was written on the above equipment for the same apparent reasons and then on November 10, 1984, Deviation No. ES-00403 was issued to document the above discrepancies and the deviation report was signed off on February 28, 1985, as being resolved.

At the time this discrepancy was first documented on May 24, 1984, Georgia Power Company's (GPC's) field procedures required that the inspector first document the discrepancy on a deviation notice. However, if corrective action was not instigated within two (2) working days then the matter was to be reported on a deviation report per GPC's Field Procedure GD-T-01. In the above case this procedural requirement was not followed and therefore, appears to be a violation of procedure.

The inspector requested to review other deviation notices in this time frame to see if this was an isolated case or if there existed other examples where deviation notices were not turned into deviation reports in a timely manner

as required by procedure. The licensee stated that their procedures have been changed since that time and that since deviation notices were not official documents (i.e. they were used like a memo to notify Engineering of a deviation), they did not save them so there was not a file on hand for the inspector to review.

Based on this being the only example, the inspector considers the above matter to be an isolated case and since the licensee identified and took the necessary corrective action, no enforcement action will be taken for the apparent procedural violation.

No violations or deviations were identified.

16. Safety-Related Pipe Support and Restraint Systems - Unit 1 (50090C)

Periodic inspections were conducted to observe construction activities of safety-related systems to verify that:

- Supports are located and installed as specified.
- The surface of weld meets applicable code requirements and is free from unacceptable grooves, abrupt ridges, valleys, undercuts, cracks, discontinuities, or other indications which can be observed on the welded surface.

The inspector conducted a walkdown of the NSCW Train A & B Supply & Return Header Pipe Supports in the NSCW Tunnel. An inspection of the above attributes was conducted for the following completed/accepted pipe supports:

<u>Pipe Support Dwg. No./Revision</u>	<u>Support type</u>
V1-1202-088-H035, Rev. 3	Fixed - Spring Can
V1-1202-088-H036, Rev. 4	Fixed - Spring Can
V1-1202-088-H038, Rev. 5	Fixed - Spring Can
V1-1202-004-H059, Rev. 2	Fixed - Spring Can

No violations or deviations were identified.

17. Electrical (Components and Systems) - Units 1 & 2 (51053C)

Periodic inspections were conducted during the inspection period to observe safety-related electrical equipment to verify that the installation and storage were accomplished in accordance with applicable requirements. The following areas were examined during the inspections:

- Location and alignment
- Type and size of anchor bolts
- Identification
- Segregation and identification of nonconforming items
- Equipment space heating

- Rotation of motor shafts
- Lubrication and fluid levels
- Protective coatings, preservations, desiccants, inert gas blanket, etc.

During the inspection period, periodic inspections were conducted of the licensee preparations for the initial diesel vendor run on Train "B". The inspector reviewed the startup operation instructions (SOI's) titled: Initial Diesel Generator Startups and Diesel Generator Phase Sequence Verification.

The inspector witnessed the following operations in preparation for the initial diesel vendor run on Train "B" diesel in accordance with the applicable SOI:

- Prerequisites, and initial conditions were satisfied prior to the initial diesel start
- Operating instructions, preparation for engine initial startup, and electrical preparation
- Cylinder moisture checks
- Engine governor and fuel line venting
- Diesel run
- Functional testing of the diesel engine control panel

No violations or deviations were identified.

18. Electrical (Cables and Terminations) - Unit 1 (51063C)

a. Raceway/Cable Installation

The inspector reviewed and examined implementation portions of the following procedures pertaining to raceway/cable installation to determine whether they comply with applicable codes, standards, NRC Regulatory Guides and licensee commitments.

- ED-T-02, Rev. 8 Raceway Installation
- ED-T-07, Rev. 9 Cable Installation

In reference to the raceway installation, the following areas were inspected to verify compliance with the applicable requirements:

- Identification
- Alignment
- Bushings (Conduit)
- Grounding
- Supports and Anchorages

In reference to the cable installation the following areas were inspected to verify compliance with the applicable requirements:

- Protection from adjacent construction activities (welding, etc.)
- Coiled cable ends properly secured
- Non-terminated cable ends taped
- Cable trays, junction boxes, etc., reasonably free of debris
- Conduit capped, if no cable installed
- Cable supported
- Bend radius not exceeded
- Separation

The inspector reviewed the EE580 cards for cable pull no's. 1CD1M04SN and 1CD1M03SN.

b. Cable Terminations

The inspector reviewed and examined implementation portions of the following procedures pertaining to cable termination to determine whether they comply with applicable codes, standards, NRC Regulatory Guides and licensee commitments.

- ED-T-08, Rev. 7 Cable Termination

In reference to cable terminations the following areas were inspected to verify compliance with the applicable requirements.

- Cable identification
- Proper lugs used
- Condition of wire (not nicked, etc.), tightness of connection
- Bending radius not exceeded
- Cable entry to terminal point
- Separation

The inspector witnessed the Quality Control Inspector inspections of the following Class 1E terminations:

<u>Termination Number</u>	<u>Equipment Number</u>	<u>Junction Box</u>	<u>Wire Number</u>
1BBB23SF2	---	1BHJB2669	X2 1 C7 2 C1 3 C4 4
1AH12604SJ1	---	1AHJB2555	N1 11 C4 12
1BH12148SR1	---	1BHJB1311	N1 13 C1 7

1BH12148WC2	---	1BHJB1311	CD5 19 CD6 20 SHLD 21
1BBC20LA1	1-1805-S3-BBC	1BBC20	M1 A M2 B
1BBC06SC1	1-1805-SC-BBC	1BBC06W	H1 U24
1BBA29SC2	---	1BHJB2670	X1 1 C6 2 C1 3 C2 4

No violations or deviations were identified.

19. Preoperational Test Program Implementation/Verification - Unit 1 (70302) (71302)

The inspector reviewed, in part, the implementation of the preoperational test program. Test program attributes inspected included review of administrative requirements, document control, documentation of major test events and deviations to procedures, operating practices, instrumentation calibrations, and correction of problems revealed by the test.

Specific activities reviewed included the following test procedure:

<u>Preop No.</u>	<u>Preop test Procedure Title</u>
1-300-17, Rev. 0	Steam Generator Secondary Side Hydrostatic Test

The inspector also conducted a verification of the initial valve lineup on the following lines in accordance with Appendix VIII-1 of the above procedure on October 17, 18, 1985:

<u>P&ID No./Revision</u>	<u>Pipe Run Valve Lineup Inspected</u>
1X4DB159-1, Rev. 17	Steam Generator No's, 3 & 4 Connections and Steam Lines
1X4DB159-2, Rev. 14	Steam Generator No's. 1, 2, 3, & 4 Main Steam Line
1X4DB159-3, Rev. 11	Steam Generator No's. 1 & 2 Connections and Main Steam Lines
1X4DB168-3, Rev. 15	Steam Generator No's. 1 & 4 Main Feedwater Lines

1X4DB161-2, Rev. 14

Steam Generator No's. 1 & 4 Auxiliary
Feedwater Supply Line

The inspector noted the following discrepancies in the valve lineup:

<u>Valve No.</u>	<u>Required Position</u>	<u>Tagged Position</u>	<u>As Found Position</u>
1-1301-X4-024	Open	Open	Less Than 1/2 Open
1-1301-U4-118	Open	Open	Closed
1-1301-X4-071	Closed	Closed	Closed Tagged 072
1-1301-X4-072	Closed	Closed	Closed Tagged 071
1-HV3006A	Open	Open	1/2 Open
1-HV13005A	Open	Open	1/2 Open
1-HV3026A	Open	Open	1/2 Open
1-HV13008A	Open	Open	1/2 Open
1-1302-X4-098	Closed	Open	Closed
1-1302-X4-099	Closed	Open	Closed
1-1302-X4-100	Closed	Open	Closed
1-1302-X4-101	Closed	Open	Closed

On October 18, 1985, the inspector conducted an inspection of the official Secondary Hydro Procedure Package. The inspector noted in that Step 5.29 which stated to install the thermocouples per Appendix XIII had been signed off as being completed on October 14, 1985. However, at the time of this inspection only four of eight thermocouples were in fact installed and Appendix XIII had not been completed. The valve lineup and thermocouple discrepancies were identified to the licensee.

The licensee informed the inspector the following: (1) A valve line-up reverification would be performed on the initial valve line-up and that a final valve line-up had yet to be performed which would reverify all the boundary valves prior to the hydro, and (2) The thermocouples had apparently been removed by construction for pre-service inspection on the welds at the main steam and feedwater nozzle connections. Operations would discuss this matter with construction to reinforce the importance of not removing testing equipment. In addition, the fact that the thermocouples

were not installed would have been picked up on the data logger since these monitoring points would not indicate.

The inspector stressed with the licensee the importance of properly conducting preoperational testing; valve line-ups must be accurate, procedures must reflect the system test status, and test equipment must be closely controlled. Management attention should be increased to ensure that safety-related system testing will be properly controlled.

The inspector witnessed the Secondary Hydrostatic Test on October 21, 1985. The following attributes were verified by the inspector during the test:

- Sufficient management on hand to supervise/observe the hydrostatic test.
- Pullman ANI and Westinghouse ANI on hand during the Hydrostatic Test.
- Test pressure held at 1487+12, -0 psig for a minimum after (10) minutes.
- Leak checking visual inspection within the hydro pressure boundary was conducted with Pullman Hydro Package 1-1305-15.
- Steam generator temperatures were monitored at designated locations throughout the test in accordance with applicable requirements.
- Calibrated test gauges were used for the official and back-up test gauge.

No violations or deviations were identified.

20. Safety-Related Piping (Welding) - Unit 1 (55083C)

Periodic inspections were conducted on safety-related pipe welding at various stages of weld completion. The purpose of the inspection was to determine whether the requirements of applicable specifications, codes, standards, work performance procedures and QC procedures are being met as follows:

- That the weld area cleanliness was maintained and that pipe alignment and fit-up tolerances were within specified units.
- That weld filler material being used was in accordance with welding specifications, that filler material was separated from other types of material and was stored in heated rod caddies, and stubs were properly removed from the work location.
- That there were no evident signs of cracks, excessive heat input, sugaring, or excessive crown.

Installation Activities

During the inspection period, welds at various stages were observed in the following systems:

- Residual Heat Removal System
- Component Cooling Water System
- Chemical & Volume Control System
- Nuclear Service Cooling Water System

No violations or deviations were identified.

21. Management Meetings (30702B)

On September 27, 1985, the Resident Inspectors attended a project status meeting presented by the licensee to R. Walker, Director, Division of Reactor Projects out of Region II. The topics presented by the licensee are as follow: (1) Present Site Organization (2) Anti-Drug Program, (3) Construction Overview, (4) Nuclear Operation Overview, (5) Quality Assurance, & (6) Readiness Review. The meeting was followed by a tour of the facility and the Training Center/Simulator.