



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

Report Nos.: 50-413/85-11 and 50-414/85-09

Licensee: Duke Power Company
 422 South Church Street
 Charlotte, NC 28242

Docket Nos.: 50-413 and 50-414

License Nos.: NPF-35 and CPPR-117

Facility Name: Catawba

Inspection Conducted: March 26 - 29, 1985

Inspector: *J. Blake*
 W. P. Kleinsorge, P.E.

4/8/85
 Date Signed

Approved by: *J. Blake*
 Jerome J. Blake, Section Chief
 Engineering Branch
 Division of Reactor Safety

4/8/85
 Date Signed

SUMMARY

Scope: This routine, unannounced inspection entailed 32 inspector-hours on site in the areas of construction progress, and housekeeping, preservice inspection (Unit 2) and inspection (Units 1 and 2) and inservice testing of pumps and valves (Unit 1).

Results: No violations or deviations were identified.

8505230063 850410
 PDR ADOCK 05000413
 G PDR

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *J. W. Cox, Superintendent of Technical Service
- *G. T. Smith, Superintendent of Maintenance
- *C. W. Graves, Jr., Superintendent of Operations
- *A. S. Bhatnagar, Test Engineer
- *R. Jones, Test Engineer
- *E. M. Couch, Project Manager
- *B. Bright, Engineering Manager
- *T. D. Mills, Construction Engineer
- *J. C. Allgood, Electrical Tech Support
- *T. H. Propst, Mechanical Technician
- *Z. Taylor, Test Engineer
- *J. Cherry, Quality Assurance (QA) Engineer
- *K. Schmidt, QA Engineer
- *E. Miller, QA Engineer
- *J. W. Willis, QA Engineer
- *D. Hensley, Licensing Specialist
- *D. James, QA Technician
- *G. Keener, QA Surveillance Engineer

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

NRC Resident Inspectors

- *P. K. Van Doorn
- *P. Skinner

*Attended exit interview

2. Exit Interview (30703B)

The inspection scope and findings were summarized on March 29, 1985, with those persons indicated in paragraph 1. above. The inspector described the areas inspected and discussed in detail the inspection findings listed below. No dissenting comments were received from the licensee.

(Open) Inspector Followup Item 413/85-11-01 and 414/85-09-01: "QA Program Responsibility" - paragraph 6a(1)(a).

(Open) Inspector Followup Item 413/85-11-02 and 414/85-09-02: "PSI/ISI Audits" - paragraph 6a(1)(b).

(Open) Inspector Followup Item 413/85-11-03 and 414/85-09-03: "Unavailable Procedures" - paragraph 6b(1)(a).

(Open) Inspector Followup Item 413/85-11-04 and 414/85-09-04: "Level III Approval" - paragraph 6b(1)(b).

(Open) Inspector Followup Item 413/85-11-05 and 414/85-09-05: "PSI/ISI Code of Record" - paragraph 6b(2)(a).

(Open) Inspector Followup Item 413/85-11-06 and 414/85-09-06: "Regulatory Guide 1.150 Revision" - paragraph 6b(2)(b).

(Open) Inspector Followup Item 413/85-11-07: "IST Code of Record" - paragraph 7a(1).

(Open) Inspector Followup Item 413/85-11-08: "IST Plan Change Control" - paragraph 7a(2).

(Open) Inspector Followup Item 413/85-11-09: "IST Scheduling Procedure" - paragraph 7c.

(Open) Inspector Followup Item 413/85-11-10: "Summary Status List" - paragraph 7d.

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

3. Licensee Action on Previous Enforcement Matters (92702B)

This subject was not addressed in the inspection.

4. Unresolved Items (92701B)

Unresolved items were not identified during this inspection.

5. Independent Inspection Effort (Units 1 and 2)(92706B)

Construction Progress and Housekeeping

The inspector conducted a general inspection of Unit 2 containment, Units 1 and 2 auxiliary buildings, Unit 2 laydown areas and Unit 1 protected area to observe construction progress and activities such as welding, material handling and control, housekeeping and storage.

Within the areas examined no violations or deviations were identified.

6. Preservice Inspection (PSI)(Unit 2) and Inservice Inspection (ISI)(Units 1 and 2)

The inspector examined documents, activities, and records as indicated below to determine whether PSI and ISI were being conducted in accordance with applicable procedures, regulatory requirements, and licensee commitments. The applicable code for the ISI of Unit 1 is American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, 1980 edition with addenda through winter 1981. The applicable code for the PSI of Unit 2 is ASME B&PV Code Section XI, 1974 edition with addenda through the Summer 1975.

a. Review of Program (73051B)

- (1) The inspector reviewed licensee documents to ascertain whether the PSI and ISI programs had been approved by the licensee, and whether adequate QA plans and procedures had been established (written, reviewed, approved, and issued) to assure that organizational structure and QA personnel, audits, general QA requirements, work and quality inspection procedures, control of processes, corrective action, document control, examination control and control of examination equipment, quality records, and qualification of personnel were controlled and accomplished. The following documents were examined:

<u>Document Identification</u>	<u>Title</u>
DPC-APM, Rev. 21	"Administrative Policy Manual for Nuclear Stations"
DPC-QA-131, Rev. 7	"Quality Assurance Training"
DPC-QA-230, Rev. 10	"Departmental Audit Scheduling and Followup"
DPC-QA-210, Rev. 17	"Departmental Audit Procedure"
DPC-QA-130, Rev. 11	"Qualification and Training of Auditors"
DPC-QA-513, Rev. 3	"Control of Preservice and Inservice Inspection Plans"
DPC-QA-100, Rev. 8	"Preparation and Issue of Quality Assurance Procedures"
DPC-QAM, Rev. 34	"Quality Assurance Department Quality Assurance Manual"
DPC-QCK-1, Rev. 18	"Control of Nonconforming Items"

DPC-QAP-Q-1, Rev. 22	"Control of Nonconforming Items"
DPC-QA-QCPM, Rev. 80	"Quality Assurance Department Operations Division Quality Control Manual"
DPC-QA-113, Rev. 3	"Procedure for Microfilming Records"
DPC-QA-301, Rev. 8	"Management of Project QA Records"
DPC-QCB-1, Rev. 20	"Control of Measuring and Test Equipment and Calibration Standards"
DPC-QAP-0-1, Rev. 26	"Control of Measuring and Test Equipment"
DPC-QA-116, Rev. 5	"Quality Assurance Records Collection, Storage and Retention"
DPC-QCL-5, Rev. 5	"Control of Preservice and Inservice Inspection Activities"
DPC-QA-509, Rev. 10	"Preparation of Quality Control Procedures"
DPC-QAP-A-1, Rev. 17	"Preparation and Issue of Quality Assurance Procedures"
DPC-QA-140, Rev. 8	"Quality Assurance Training"
Inservice Inspection Plan Catawba Nuclear Station Units 1 and 2, Revision 0	
Preservice Inspection Plan Catawba Nuclear Station Units 1 and 2, Revision 5	
DPC - Duke Power Company B&W - Babcock and Wilcox	

- (a) With regard to the examination above the inspector noted that neither the ISI nor PSI plans delineate the (QA) program coverage for the various inspections covered by DPC B&W and CONAM. The licensee indicated that they would amend both the ISI and PSI plans to clarify this issue. This matter will be identified as inspector followup item 413/85-11-01 and 414/85-09-01: "QA Program Responsibility."
- (b) With regard to the examination above the inspector was unable to find any documented objective quality evidence that the PSI/ISI programs would be covered by the DPC audit program.

This matter will be the subject of additional NRC review and will be identified as inspector followup item 413/85-11-02 and 414/85-09-02: "PSI/ISI Audits."

- (2) To ascertain whether the program specifies personnel qualification requirements consistent with Regulatory Guide 1.58 - "Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel," American National Standards Institute (ANSI) Standard ANSI N45.2.6 and American Society for Nondestructive Testings (ASNT) Standard SNI-TC-1A, the inspector reviewed procedure DPC-NDE-B, Revision 7, "Training Qualification and Certification of NDE Personnel."
- (3) The inspector reviewed the below listed documents to determine whether the PSI and ISI program and referenced documents contain adequate provisions relative to the control of Nondestructive Examination (NDE) records in the following areas: examination results; NDE equipment-listing; calibration data sheets; calibration blocks-listing; personnel qualifications; and drawings, sketches, and work orders.

The inspector reviewed the below listed documents to verify that responsibilities have been assigned for maintenance of required NDE records and that controls have been established to accomplish the following: define record storage facility; designate a custodian; describe the filing system; establish a method for verification that records and materials reviewed for storage are in agreement with transmittal documentation; provision governing access to files; and establishment of filing supplemental information.

<u>Documentation Identification</u>	<u>Title</u>
DPC-QA-102, Rev. 4	"Storage of Special Processed Records"
DPC-QA-101, Rev. 4	"Quality Assurance Record Storage Area (General Office Corporate Vault)"
DPC-QA-116, Rev. 5	"Quality Assurance Records Collection, Storage and Retention"
DPC-QA-111, Rev. 4	"Transfer of QA Records"
DPC-QA-113, Rev. 3	"Procedure for Microfilming Records"
DPC-QA-301, Rev. 8	"Management of Project QA Records"

b. Review of Procedures (73052B)

- (1) To ascertain whether the PSI and ISI procedures had been approved by authorized licensee personnel and level III examiners the inspector reviewed the following procedures:

<u>Procedure No.</u>	<u>Title</u>
B&W - ISI-50, R8	"Technical Procedure Describing Surface Requirements of Welds, Adjacent Base Metal, and Components for NDE"
B&W - ISI-55, R0	"Technical Procedure for Sulfur Content Analysis"
B&W - ISI-56, R0	"Technical Procedure for Halogen Content Analysis"
B&W - ISI-83, R1	"Measurement of Ultrasonic Instrument Performance Characteristics"
B&W - ISI-104, R18	"Ultrasonic Examination of Ligaments Between Threaded Holes and of Studs and Bolts One Inch and Larger in Diameter"
B&W - ISI-105, R10	"Ultrasonic Examination of Reactor Vessel Closure Nuts"
B&W - ISI-114, R4	"Ultrasonic Examination of Calibration Blocks Prior to Drilling of Calibration Holes"
B&W - ISI-117, R5	"Ultrasonic Examination of Reactor Coolant Pump Motor Flywheel"
B&W - ISI-119, R3	"Ultrasonic Examination of Stainless Steel and Nickel Base Alloy Weld Seams"
B&W - ISI-120, R15	"Ultrasonic Examination of Piping and Vessel Welds Joining Similar and Dissimilar Materials"
B&W - ISI-125, R2	"Ultrasonic Examination for Intergranular Stress Corrosion Cracking in Stainless Steel or Nickel Base Alloy Piping"
B&W - ISI-130, R16	"Ultrasonic Examination of Vessel Welds and Nozzle Inside Radius Sections"

B&W - ISI-131, R9	"Remote Ultrasonic Examination Using the ARIS Device"
B&W - ISI-240, R12	"Penetrant Examination of Weld and Base Materials, Including Studs and Nuts"
B&W - ISI-270, R10	"Wet or Dry Methods of Magnetic Particle Examination of Welds, Studs, Bolts, and Pump Motor Flywheels"
B&W - ISI-350, R12	"Visual Examination of Welds and Surface Conditions"
B&W - ISI-353, R3	"Visual Examination of Pipe Hangers, Supports, and Restraints"
B&W - ISI-362, R10	"Identification and Layout of Welds and System Components"
B&W - ISI-423, R1	"Multifrequency Eddy Current Examination of .750" OD x .044" Wall RSG Tubing in Westinghouse Steam Generators"
B&W - ISI-424, R7	"Multifrequency Eddy Current Examination of .750" OD x .044" Wall RSG Tubing for Detection of Tube Wear at Support Plates"
B&W - ISI-425	"Eddy Current Evaluation of Tubing by the Absolute Multicoil (8 x 1) Technique for Detection of Tube Wear at Support Plates"
B&W - ISI-460, R5	"Technical Procedure for the Evaluation of Eddy Current Data of Nuclear Grade Steam Generator Tubing"
B&W - ISI-462	"Technical Procedure for the Evaluation of Eddy Current Data for Debris and Sludge in Steam Generators"
B&W - ISI-463	"Technical Procedure for the Evaluation of Eddy Current Data Generated for the Multi-element Probe"
B&W - ISI-464, R0	"Technical Procedure for the Evaluation of Eddy Current Data of Nuclear Grade Steam Generator Tubing for Wear Fretting"

B&W - ISI-467	"Technical Procedure for the Evaluation of Eddy Current Data of Nuclear Grade Steam Generator Tubing for Intergranular Attack"
DPC - NDE-12, R3	"General Radiography Procedure for Preservice and Inservice Inspection (1980)"
DPC - NDE-25, R4	"Magnetic Inspection Technique for Preservice and Inservice Inspection (1980) Yoke Method"
DPC - NDE-26, R6	"Wet Nonfluorescent and Fluorescent Magnetic Particle Examination Techniques for Examination of Pressure Retaining Bolting"
DPC - NDE-35, R3	"Liquid Penetrant Examination Technique (Color Contrast, Solvent Removable Method) for Preservice and Inservice Inspection (1980)"
DPC - NDE-37, R0	"Liquid Penetrant Examination Technique (Color Contrast, High Temperature)"
DPC - NDE-44, R5	"Ultrasonic Examination of Bolts and Studs for Preservice and Inservice Inspection"
DPC - QCL-13, R1	"ISI Visual Examination, VT-1"
DPC - QCL-14, R3	"ISI Visual Examination, VT-3 and VT-4"
DPC - QCL-15, R2	"ISI Visual Examination, VT-2"
DPC - APP-1	"Flaw Indication Characterization"
DPC - CP-453, R9	"Liquid Penetrant Examination for Base Line Inspection"
DPC - NDE-11, R4	"General Radiography Procedure for Preservice and Inservice Inspection"
DPC - NDE-24, R6	"Magnetic Particle Inspection Method - Yoke Method for Preservice and Inservice Inspection"

DPC - NDE-33, R4	"Liquid Penetrant Examination Technique (Color Contrast, Solvent Removable Method) for Preservice and Inservice Inspection"
DPC - NDE-46, R4	"Ultrasonic Examination of Reactor Vessel Closure Nuts for Preservice and Inservice Inspection"
DPC - QA M-4, R19	"Visual Inspection and NDE of Welds (ASME III)"
DPC - QA M-10, R21	"Process Control and Inspection of the Application of Torque or Tension to Bolts and Studs"
DPC - QA M-12, R3	"Valve Disassembly and Assembly Inspection"
CONAM - 42-EC-085, R0	"Multifrequency Eddy Current Procedure Westinghouse Series D4 and D5 Steam Generator Tubing MIZ-18 Digital Eddy Current System"

- (a) With regard to the examination above the inspector noted that the following procedures were unavailable for review:

B&W - ISI - 425
462
463
467

DPC-APP-1

This will be identified as inspector followup items 413/85-11-03 and 414/85-09-03: "Unavailable Procedures".

- (b) With regard to the examination above the inspector was not able to verify that Procedure Nos. B&W - ISI-83, 104, 119, 130 and 240 were reviewed by a Level III examiner.

This matter will be identified as inspector followup item 413/85-11-04 and 414/85-09-04: "Level III Approval."

- (2) To ascertain whether the licensee's commitments pertaining to PSI and ISI as described in the Safety Evaluation Report and the Technical Specifications are reflected in NDE procedures, the inspector reviewed the procedures listed in paragraph 6b(1) above.

- (a) With regard to the examination above the inspector noted that the following PSI program referenced procedures do not reference the PSI Code Section XI edition and addenda of record 74S75:

DPC-NDE-26
 DPC-QA-M4
 DPC-QA-M10
 DPC-QA-M12

All the DPC Procedures and the B&W Procedures referenced in the ISI program do not reference the ISI Code Section XI edition and addenda of record 80W81.

This matter will be identified as inspector followup items 413/85-11-05 and 414/85-09-05: "PSI/ISI Code of Record."

- (b) With regard to the examination above the inspector noted that the Unit 2 PSI Plan referenced Regulatory Guide 1.150, Revision 1, while the Units 1 and 2 ISI Plan referenced Regulatory Guide 1.150 Revision 0. The licensee indicated that the ISI Plan will be amended to reflect Revision 1 vice Revision 0.

This matter will be identified as Inspector followup items 413/85-11-06 and 414/85-09-06: "Regulatory Guide 1.150 Revision."

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

7. Inservice Testing (IST) of Pumps and Valves (Unit 1)

The inspector reviewed procedures and other appropriate requirement documents, conducted interviews with responsible personnel, and reviewed records to determine whether IST was being performed consistent with regulatory requirements and licensee commitments. The applicable code for IST is ASME B&PV Code Section XI 80W81.

- a. The inspector reviewed the below listed documents to verify that the licensee had assigned responsibilities to persons and organizations for the following: preparation, review, and approval of IST procedures; scheduling of IST; performance of test functions; performance of maintenance; and performance of calibrations.

DPC-CNSD-3.2.2 (TS), Rev. 8

"Development and Conduct of
 Periodic Testing Program"

Inservice Testing Program for Pumps and Valves Catawba Nuclear Station
 Unit 1, Revision 9

DPC-CNSD-4.2.1 (TS) Rev. 16	"Development, Approval and Use of Station Procedures"
DPC-MMP-1,2, Rev. 3	"Instrument and Electrical Section Procedure Development"
DPC-PP-5.2, Rev. 6/14/82	"Valve Inservice Testing Program Statement"
DPC-PP-5.4, Rev. 6/7/83	"Documentation of Periodic Test Development"
DPC-MMP-1.0, Rev. 16	"Work Request Preparation"
DPC-CNSD-2.3.1(m), Rev. 7	"Control of Test and Measuring Equipment"

- (1) With regard to the examination above the inspector noted that the Pump and Valve Inservice Testing Program Unit 1, Revision 9 references ASME B&PV Code Section XI 80W80. The inspector discussed this matter with the licensee. The licensee indicated that the program would be amended to reflect Section XI 80W81, the Code of record for ISI as required by Title 10 Code of Federal Regulations, Part 50.55a(g), before commercial operation.

This matter will be identified as inspector followup item 413/85-11-07: "IST Code of Record."

- (2) With regard to the examination above the inspector noted that Revision 9 to the IST program contains over 100 pages, a significant number of which contain changes. The document does not have a "list of effective pages;" therefore, without a direct comparison with the master copy of the document, it would be impossible to determine whether other controlled copies are properly maintained and updated. The licensee indicated that they would review the matter.

This matter will be identified as inspector followup item 413/85-11-08: "IST Plan Change Control."

- b. To verify that the control of issuance and revision of test procedures are in accordance with applicable controlling procedures, the inspector reviewed the below listed test procedures and revisions:

<u>Procedure No.</u>	<u>Changes/Revisions</u>	<u>Title</u>
PT/1/A/4200/13C	0-13	"RN Valve Inservice Test (QU)"
PT/1/A/4200/10A	0-19	"Residual Heat Removal 1A Performance Test"

- c. To verify that tests are scheduled at required frequencies, the inspector had a discussion with scheduling personnel and reviewed DPC-CNSD-3.2.2 (TS), Revision 8. The inspector determined that, at present, pump and valve tests required by ASME B&PV Code, Section XI subsections IWP and IWV are scheduled by an undocumented informal system, using data from the CPT computer program. The CPT program provides the dates of previous tests, and due dates for the next required test, but does not schedule the next test. The licensee indicated that a scheduling program that includes subsections IWP and IWV tests is currently in preparation and should be completely operational before the start of commercial operation. The inspector stated that the above matter would be identified as inspector followup item 50-413/85-11-09: "IST Scheduling Procedure."
- d. To verify that summary status lists, as required by ASME B&PV Code Section XI, paragraph Nos. IWP-6210 and IWV-6210 are maintained to indicate the status of testing of pumps, and valves, and that the status lists properly reflect scheduled tests, the inspector had a discussion with IST personnel and reviewed the CPT computer program discussed above. The licensee indicated that the CPT program currently contains the dates of the last subsection IWP and IWV test performed on each pump and valve contained in the IST program. The CPT program data base is updated, at a minimum, weekly as it related to the performance of tests. The CPT program data base has a field for remarks that could contain such data as: operational status, increased test frequency, alert range, and action required range. Presently the licensee has not programmatically addressed in writing compliance with IWP and IWV210. The inspector indicated that this matter be identified as inspector followup item 50-413/85-11-10: "Summary Status List."

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