



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
101 MARIETT STREET, N.W.
ATLANTA, GEORGIA 30303

Report Nos.: 50-413/84-94 and 50-414/84-41

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

Docket Nos.: 50-413 and 50-414

License Nos.: NPF-24 and CPPR-117

Facility Name: Catawba 1 and 2

Inspection Conducted: September 25-28, 1984

Inspector: George Holatum for 10/12/84
N. Economos Date Signed

Accompanying Personnel: B. Uryc

Approved by: W. P. Ang for 10-12-84
J. J. Blake, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection involved 28 inspector-hours on site in the areas of containment (structural steel welding) - review of quality records, safety-related structures (welding I and II), review of quality records, reactor coolant pressure boundary piping I and II observation of work and work activities, reactor coolant pressure boundary piping - review of quality records (I and II), Unit 2; review license conditions Units 1 and 2.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Licensee Employees Contacted

- *R. L. Dick, Vice President-Construction, Acting Project Manager
- *L. R. Davison, Project QA Manager
- T. B. Bright, Engineering Manager
- *E. B. Miller, QA Surveillance Supervisor
- *D. P. Hensely, QA Technician
- B. Gillespie, QA, Welding/NDE
- H. L. Atkins, QA Engineer Welding/NDE
- J. Sanborn, Assistant Field Engineer/Mechanical
- E. B. Kulesa, Jr., Field Engineer/Mechanical

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

NRC Resident Inspector

*P. K. VanDoorn

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on September 28, 1984, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection finding listed below.

a. License Condition (Unit 1)

Construction Deficiency Report (CDR)

(Closed) CDR 413, 414/84-15, Replace Limitorque Valve Operator Drain Plugs, paragraph 10.

b. Licensee Identified Items

(Closed) CDR 414/83-17, Special Welding Bosses Installed in Lieu of Restrictors, paragraph 10.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

No new unresolved items were identified.

5. Audit/QA Surveillance Record Review, Unit 2 Containment - Structural Steel Welding (55055), and Safety-Related Structures (55065, 55066)

Surveillance of construction activities is performed in accordance with Procedure QA-300, Rev. 12, Construction Surveillance. This procedure provides instructions/guidance for this activity at Duke Power Company (DPC) construction projects. The QA Surveillance program has been written in conformance with Appendix B to 10 CFR 50 and ANSI N45.2-1971, which is applicable by reference. Forms QA-300B, Rev. 1, Surveillance Report and QA-300A, Rev. 2, Surveillance Checklist are used to document the surveillance(s) and finding(s).

Following is a list of surveillance records reviewed:

<u>Surveillance Number</u>	<u>Date Performed</u>	<u>Area</u>	<u>Findings</u>
C84-16	2/21-28/84	Structural Steel Fabrication and Erection	Clear
C83-34	4/5-13/83	Embedded Plates	
C83-119	10/20/83	Embedded Plates	Clear
C83-138	12/7/83	Seismic Steel, Fire Proofing Inspection	NCI-17621
C83-98	9/8-19/83	Structural Steel	NCI-17299

These surveillance records were reviewed for adequacy, followup on identified deficiencies and disposition, completeness, legibility, and retrievability.

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

6. Reactor Coolant Pressure Boundary Piping - Review of Quality Records, Unit 2 (49055)

See paragraph 5 above for requirements and applicable procedure used to perform and document audits/surveillances.

Following are surveillance records reviewed:

<u>Surveillance Number</u>	<u>Date Performed</u>	<u>Area</u>	<u>Findings</u>
C83-49	7/15-18/83	Piping System Installation Inspection	No Significant findings
CE1-2-11-82	11/3-19/82	Pipe Support Activities	Clear
MWN-3-9-82	9/7-23/82	Nondestructive Testing	Clear
MWN-3-10-82	10/21/82	Nondestructive Testing	Clear

These surveillance records were reviewed for adequacy, followup on identified deficiencies and disposition, completeness, legibility, and retrievability.

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

7. Reactor Coolant Pressure Boundary (RCPB) Piping - Observation of Work and Work Activities, Unit 2 (49053, 49054)

Piping activities, i.e., receiving, handling, installation and NDE on the major RCPB systems is complete. As an alternative to work observation, the inspector reviewed the below listed radiographs of welds and quality records of piping material to ascertain whether these records indicate that such activities as NDE, receipt inspections, cleanliness, storage, and material quality were consistent with Regulatory and Code, ASME Section III (74S76) requirements.

<u>Item</u>	<u>Size</u>	<u>Heat #</u>	<u>DWG #</u>	<u>Material Type</u>
Spool Piece Flange # 300	4" x .237"	HJ034	2ND-30	SA-182
90°ELL, Fitting	4" x .237"	RW-1049919	2ND-30	SA-403

For these two items, the attributes included receiving inspection reports, certified material tests, NDE records and related personnel qualifications and cleanliness at time of installation.

Following is a compilation of welds where NDE (radiography) had been performed to determine weld integrity as required by the aforementioned code. The approved DPC procedure used to produce and evaluate these radiographs was NDE-10 which was written to comply with ASME Code Section III 1980 and Section V Articles 1 and 2 with addenda through winter 1982.

<u>Weld</u>	<u>Size</u>	<u>Drawing</u>	<u>Comment</u>
<u>Safety Injection</u>			
INI63-9	1" x 10"Ø	2NI63	Clear
2NI66-8	.351" x 4"Ø	2NI66	Clear

<u>Weld</u>	<u>Size</u>	<u>Drawing</u>	<u>Comment</u>
<u>Chemical Volume Control</u>			
2NV24-18	.280" x 6"Ø	2NV24	Clear
2NV23-14	.237" x 4"Ø	2NV23	Clear
2NV17-1	.531" x 4"Ø	2NV17	Clear
2NV325-6	.219" x 3/4"Ø	2NV325	NCI #18911 -LOP in adjacent socket weld #2NV325-7 Cleared on 8/27/84
2NV314-7	.216" x 3"Ø	2NV314	NCI #18887 - Porosity in in valve body outside weld prep. Cleared on 9/12/84.
<u>Main Feedwater</u>			
CF2551-10	.337" x 4"Ø	CNI-CF2551	Clear

The radiographs were reviewed for code compliance, completeness, and accuracy of documentation of personnel qualifications as applicable.

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

8. Reactor Coolant Pressure Boundary Piping - Review of Quality Records, Unit 2 (49056)

The inspector reviewed quality records as detailed below for reactor coolant pressure boundary piping to determine whether applicable code and procedure requirements were being met. The applicable code for reactor coolant pressure boundary piping is the ASME Boiler and Pressure Vessel Code, Section III, Subsection NB, 1974 Edition including Addenda through S76.

- a. Records consisting of "Receiving Inspection Information Reports" (RIIRs), Form P-1A, Certified Material Test Reports and code data reports as applicable were reviewed for the following components:

<u>ISO</u>	<u>Component</u>	<u>Size</u>	<u>Heat #</u>
Reactor Coolant System 2CN-154, Rev. 0	Reducer	2" x 1"	J4ZHH
	Valve 2NC039- Globe S/N THD2-5	2"Ø	--
	90°ELL Pipe (SA-376)	1"Ø 1" x SCH. 160	GWHI 455659

<u>ISO</u> (Continued)	<u>Component</u>	<u>Size</u>	<u>Heat #</u>
Safety Injection 2NI-335, Rev. 1	90°ELL, SW SA-182	1"Ø 3000#	BY
	Valve 2NI077 S/N BAB 12-12 Kerotest	1"Ø 1665#	--
	Pipe	1"Ø SCH.40	280466
Reactor Coolant, C1 Loop A 2NC-156 Rev. 2	Pipe	3/4"Ø SCH.160	97446
	Valve S/NVM16-14 #1513	3/4" Kerotest	--
	90°ELL	3/4"Ø	TJ

The records were reviewed in the areas of:

- Material certification records including chemical composition, physical characteristics, and NDE
- Receiving inspection records including inspection for damage and conformance to requirements
- Nonconforming material records as applicable
- Installation records with information on alignment, cleanliness, and material checklists.

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

9. Independent Inspection Effort (92706B)

The inspector conducted a general inspection of the reactor building, auxiliary building, and diesel generator building (Unit 2). Activities such as welding, material control, housekeeping, and storage were observed. In addition, the following specific in-process work was observed and compared with applicable procedures:

Main Steam Line

- a. Support Mark #2-R-SM-1590, Rev. 0
ISO #CN-2491-SM-005, Rev. 17
Code ANSI B31.1
- b. Support Mark #2-R-SM-1608
ISO CN-2491-SM-007, Rev. 18
Code (see above)

In addition, the inspector reviewed related QC work records on work location, including Forms M-51c, Rev. 1, component support information record, M-58A, Rev. 0, and CP-499A, Rev. 1, support tracking form.

Within this area inspected, no violations or deviations were identified.

10. Licensee Identified Items 50.55(e) Units 1 and 2 (92700)

(Closed) CDR 414/83-17, Special Welding Bosses Installed in Lieu of Restrictors

Licensee responses to this item, but applicable to both units, were discussed in Region II Report 413/84-56. By memo to files dated September 28, 1984, DPC Construction has indicated that all the corrective action on Unit 2 was completed on August 24, 1984. The identification of all special weld boss restrictor applications was performed through onsite review of flow diagrams and piping drawings which was subsequently reviewed and confirmed as accurate by DPC's Design Engineering.

The inspector reviewed onsite available records on corrective action taken and considers these actions satisfactory.

(Closed) Significant Deficiency 413, 414/84-15, Replace Limitorque Valve Operator Drain Plugs (CDR 84-15/B4)

On June 8, 1984, DPC informed Region II that contrary to Limitorque's electric installation instructions, certain limitorque motor valve operators were assembled with pipe plugs instead of the required T-drains. The T-drains were required to maintain the Nuclear Qualification of the operator. This matter was discussed in detail with cognizant licensee personnel. In order to verify that appropriate corrective action has been taken, the inspector reviewed the data package and checked a sample of Unit 1 valves where T-drains had been installed. These were as follows:

1ND024A, 1ND0588, 1NI47A, and 1WL451B.

In view of this work effort, the inspector considers this item closed.