STATE OF THE STATE	UNITED STAT NUCLEAR REGULATOR REGION II 101 MARIETTA STR ATLANTA, GEORG	res Y COMMISSION EET, N.W. IA 30323	

Report Nos.	.: 50-269/89-18, 50-270/89-18,	and 50-287/89-18	
Licensee:	Duke Power Company 422 South Church Street Charlotte, NC 28242		
Docket Nos.	.: 50-269, 50-270, and 50-287	License Nos.:	DPR-38, DPR-47, and DPR-55
Facility Na	ame: Oconee 1, 2, and 3		
Inspection	Conducted: June 5-9, 1989		
Inspectors	R. W. Newsome R. W. Newsome Rich C. Chay R. Chay		6-15-39 Date Signed 6-15-89 Date Signed
Approved by	y: J. J. Blake, Chief Materials and Processes Sectio Engineering Branch Division of Reactor Safety	n	Date Signed
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SUMMARY

Scope:

This routine, announced inspection was conducted on-site in the areas of Inservice Inspection (ISI) including the eddy current examination of the Unit 2 Steam Generator (SG) tubing. The inspection included a review of the ISI program and the Unit 2 inspection plan for this outage; reviews of nondestructive examination (NDE) procedures; observations of in-progress NDE examinations; independent examination verifications; reviews of NDE personnel qualifications; reviews of NDE equipment calibration and material certification documentation; and, a review of completed NDE examination data. Independent inspection was conducted and NRC previously opened items were addressed.

Results:

In the areas inspected, violations or deviations were not identified.

The licensee's ISI program appears adequate in all areas inspected. No major problems were identified in any of the ISI areas inspected.

During the independent inspection conducted on pipe supports, minor discrepancies were noted for some of the pipe supports when the as-built drawings were compared with the actual support configuration in the field.



These pipe support deficiencies are additional examples of deficiencies identified in Violation 50-269, 270, 287/87-31-01 which is still pending resolution by the licensee.

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REPORT DETAILS.

1. Persons Contacted

Licensee Employees

*E. Anderson, Site Design Engineer

*T. Coleman, Quality Assurance (QA), ISI Coordinator

*T. Curtis, Compliance Manager

T. Hilderbrand, Eddy Current Examination Supervisor

*E. Legette, Compliance Engineer

*M. Tuckman, Station Manager

*J. Warren, Quality Control (QC) General Supervisor

*B. Waters, QA Manager

Other licensee employees contacted during this inspection included craftsmen, engineers, security force members, technicians, and administrative personnel.

NRC Resident Inspectors

*P. Skinner, Senior Resident Inspector *L. Wert, Resident Inspector

*Attended exit interview

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

2. Inservice Inspection

The inspectors reviewed documents and records and observed activities, as indicated below, to determine whether ISI was being conducted in accordance with applicable procedures, regulatory requirements, and licensee The applicable code for ISI is the American Society of commitments. Mechanical Engineers Boiler and Pressure Vessel (ASME B&PV) Code, Section XI, 1980 edition with addenda through Winter 1980. Duke Power NDE personnel were performing the liquid penetrant (PT), magnetic particle (MT), radiography (RT), visual (VT), and the majority of the ultrasonic (UT) examinations with Babcock and Wilcox (B&W) personnel providing technical assistance to Duke Power personnel during the UT of components not totally familiar to the Duke Power personnel. B&W personnel are conducting some of the required UT examinations for Duke Power but only on a limited basis. Steam generator tubing eddy current (EC) examination data collection was being accomplished by Duke Power personnel with B&W performing the primary manual data analysis with Duke Power personnel performing a secondary automated data evaluation.

a. ISI Program Review, Units 1, 2, and 3 (73051)

The inspectors reviewed the following documents relating to the ISI program to determine whether the plan had been approved by the licensee and to assure that procedures and plans had been established (written, reviewed, approved and issued) to control and accomplish the following applicable activities: organizational structure including qualifications, training, responsibilities, and duties of personnel responsible for ISI; audits including procedures, frequency, and qualification of personnel; general Quality Assurance requirements including examination reports, deviations from previously established program, material certifications, and identification of components to be covered; work and inspection procedures; control of processes including suitably controlled work conditions, special methods, and use of qualified personnel; corrective action; document control; control of examination equipment; quality records including documentation of indications and NDE findings, review of documentation, provisions to assure legibility and retrievability, and corrective action; scope of the inspection including description of areas to be examined, examination category, method of inspection, extent of examinations, and justification for any exception; definition of inspection interval and extent of examination; qualification of NDE personnel; and, controls of generation, approval, custody, storage and maintenance of NDE records.

- Inservice Inspection Plan Oconee Nuclear Station Unit 2, Refueling Outage #10
- QCL-5 (R9) Control Of Preservice And Inservice Inspection Activities
- QA-16 (R6) Procedure for Inspection of ASME Section XI Field Piping Welds
- NDE-A (R9) Nondestructive Examination Program Procedure
- NDE-C (R3) Calibration/Verification of NDE Equipment
- b. Review of NDE Procedures, Units 1, 2, and 3 (73052)
 - (1) The inspectors reviewed the procedures listed below to determine whether these procedures were consistent with regulatory requirements and licensee commitments. The procedures were also reviewed in the areas of procedure approval, requirements for qualification of NDE personnel, and compilation of required records; and, if applicable, division of responsibility between the licensee and contractor personnel if contractor personnel are involved in the ISI effort.

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Ultrasonic Examination Of Pipe and Vessel Welds Joining Similar And

Dissimilar Materials

ISI-120 (R25)

with FC-DPC-88-006

-	ISI-130 (R24) with CA-CAT-89-006	Ultrasonic Examination of Vessel Welds and Nozzle Inside Radius Sections
-	NDE-44 (R8) with TFC 89-02	Ultrasonic Examination of Bolts, Studs, Bushings and Threads in Flanges For Preservice And Inservice Inspection
-	ISI-460 (R14)	Technical Procedure For The Evaluation Of Eddy Current Data Of Nuclear Grade Steam Generator Tubing
-	ISI-418 (R5)	Technical Procedure for the Multi-frequency Eddy Current Examination of OTSG Tubing in 177 Steam Generators using the MIZ-18
-	ISI-464 (R4)	Technical Procedure for the Evaluation of Eddy Current Data of Nuclear Grade Steam Generator Tubing for Wear Fretting
	Eddy Current Analys Nuclear Station (Re	is Guidelines For Oconee 1,2, & 3 vision 1 5/19/89)
-	NDE-35 (R1O)	Liquid Penetrant Examination Technique (Color Contrast, Solvent Removable Method)
-	NDE-98 (R4)	Liquid Penetrant Examination Technique (color Contrast, Solvent Removable Method) For Preservice And Inservice Inspection
-	NDE-25 (R12)	Magnetic Particle Examination Procedure and Techniques

- ISI Visual Examination, VT-1 QCL-13 (R6)
- QCL-14 (R8) ISI Visual Examination, VT-3 and VT-4
- ISI Visual Examination, VT-2, Pressure QCL-15 (R6) Test
- General Radiography Procedure For NDE-12 (R7) Preservice And Inservice Inspection

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All procedures listed above have been reviewed during previous NRC inspections. Only current revisions were reviewed during this inspection.

- (2) The inspectors reviewed the Ultrasonic (UT) procedures to ascertain whether they had been reviewed and approved in accordance with the licensee's established QA procedures. The procedures were also reviewed for technical adequacy and conformance with ASME, Section V, Article 5 and other licensee commitments/requirements in the following areas: type of apparatus used; extent of coverage of weldment; calibration requirements; search units; beam angles; DAC curves; reference level for monitoring discontinuities; method for demonstrating penetration; limits for evaluating and recording indications; recording significant indications; and, acceptance limits.
- (3) The inspectors reviewed the Eddy Current (EC) procedures for technical content relative to: multichannel examination unit, multichannel examination indication equipment is specified, examination sensitivity, material permeability, method of examination, method of calibration and calibration sequence, and acceptance criteria.
- The inspectors reviewed the liquid penetrant (PT) procedures to (4) ascertain whether they had been reviewed and approved in accordance with the licensee's established QA procedures. The procedure was also reviewed for technical adequacy and conformance with ASME, Section V, Article 6, and other licensee requirements in the following areas: specified method; penetrant material identification; penetrant materials analyzed for sulfur; penetrant materials analyzed for total halogens; surface temperature; acceptable pre-examination surface conditioning; method used for pre-examination surface cleaning; surface drying time prior to penetrant application; method of penetrant application; penetrant dwell time; method used for excess penetrant removal; surface drying prior to developer application, if applicable; type of developer; examination technique; evaluation techniques; and, procedure requalification.
- (5) The inspectors reviewed the Magnetic Particle (MT) procedure to ascertain whether it had been reviewed and approved in accordance with the licensee's established QA procedures. The procedure was reviewed for technical adequacy and for conformance with the ASME Code Section V, Article 7, and other licensee commitments/requirements in the following areas: examination methods; contrast of dry powder particle color with background; surface temperature; suspension medium and surface temperature requirement for wet particles; viewing conditions; examination overlap and directions; pole or prod spacing; current or lifting power (yoke); and, acceptance criteria.

The inspectors reviewed the Visual (VT) examination procedures to (6) determine whether they contained sufficient instructions to assure that the following parameters were specified and controlled within the limits permitted by the applicable code, standard, or any other specification requirement: method direct visual, remote visual or translucent visual; application hydrostatic testing, fabrication procedure, visual examination of welds, leak testing, etc.; how visual examination is to be performed; type of surface condition available; method or implement used for surface preparation, if any; whether direct or remote viewing is used; sequence of performing examination, when applicable; data to be tabulated, if any; acceptance criteria is specified and consistent with the applicable code section or controlling specification; and, report form completion.

- The inspectors reviewed the Radiographic (RT) procedure to (7) determine whether it contained sufficient information to assure that the following parameters were specified and controlled within the limits permitted by the applicable code, or any other specification requirement: type of material to be radiographed; material and weld surface condition requirements; type of radiation source, effective focal spot or effective source size; film brand or type; number of films in cassette; minimum source to film distance; type and thickness of intensifying screens and filters: quality of radiographs; film density and contrast for single and composite viewing; use of densitometers for assuring compliance with film density requirements; system of radiograph identification; use of location markers; methods of reducing and testing for back-scatter; selection of penetrameters including penetrameter placement; number of penetrameters; shims under penetrameters; radiographic technique for double wall viewing; and, evaluation and disposition of radiographs.
- c. Observation of Work and Work Activities, Unit 2 (73753)

The inspectors observed work activities, reviewed certification records of NDE equipment and materials, and reviewed NDE personnel qualifications for personnel that had been utilized during the required ISI examinations during this outage. The observations and reviews conducted by the inspectors are documented below.

(1) The inspectors observed calibration activities and portions of the in-process ultrasonic examinations being conducted on the welds indicated below. The observations were compared with the applicable procedures and the ASME B&PV Code in the following areas: availability of and compliance with approved NDE procedures; use of knowledgeable NDE personnel; use of NDE personnel qualified to the proper level; type of apparatus used; calibration requirements; search units; beam angles; DAC curves; reference level for monitoring discontinuities; method of demonstrating penetration; extent of weld/component examination coverage; limits of evaluating and recording indications; recording significant indications; and, acceptance limits.

Item No.	<u>Weld ID</u>	Description
B02.040.002	2-SGA-WG58-2 2-CFTB-LH-SHL	SG-A, Lower head to Tube Sheet Core Flood Tank Head to Shell

The inspectors conducted an independent ultrasonic verification examination, using Duke Power equipment, on portions of welds listed above. These examinations were performed in order to evaluate the technical adequacy of the ultrasonic examination procedure being used by the licensee and to assess the validity of the information being reported by the ultrasonic examiners.

The verification ultrasonic examinations conducted by the inspectors indicated that the procedure being used to conduct the examinations is adequate and the verification examination results compared favorably with the information being reported by the ultrasonic examiners.

The following listed ultrasonic equipment and materials certification records were reviewed:

Ultrasonic Instruments

Manufacturer/Model	<u>Serial No.</u>
KB/USD-10	31501-537
KB/USK-6	27593-4182

The inspectors reviewed spectrum analysis data for the ultrasonic transducers listed below:

<u>Serial No.</u>	<u>Size</u>	Frequency
F21817	.25"	5.00 MH (megahertz)
M18425	1.0"	2.25 MH _z

Ultrasonic Couplant Batch Numbers 8661 & 8764

Ultrasonic Calibration Blocks 40350 & 40397

(2) Steam Generator Tubing Eddy Current Examination

The inspectors observed the EC activities indicated below. The observations were compared with the applicable procedures and the Code in the following areas: method for maximum sensitive is applied; method of examination has been recorded; examination equipment has been calibrated in accordance with the applicable performance reference; amplitude and phase angle have been



calibrated with the proper calibration reference and is recalibrated at predetermined frequency; required coverage of steam generator tubes occurs during the examination; acceptance criteria is specified or referenced and is consistent with the procedure or the ASME Code; and, results are consistent with the acceptance criteria.

(a) Steam generator tube eddy current data collection is being accomplished by Duke Power personnel. In-process tube data acquisition, including calibration confirmation and tube location verifications, was observed for the steam generator tubes listed below:

Row	<u>Col.</u>	Row	<u>Col.</u>
109	6	109	5
109	4	109	3
109	2	109	1
110	1	110	2
110	3	110	4
110	5	110	7
110	8	110	9
110	10	110	11
110	12	110	14
110	39	110	34
110	28		

SG-B

SG-A

Row Col.

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(b) In-process Eddy Current data evaluation, including calibration confirmation, was observed for the tubes listed below. Primary manual data analysis was being accomplished by B&W and secondary automated data analysis was accomplished by Zetec and Duke Power. If differences are noted between the two evaluations they are resolved by a designated lead analysts. The below listed tubes were jointly evaluated by the NRC inspector during the data evaluation observations conducted by the inspector. The NRC inspector's evaluation indicated that the tubes appeared to be correctly evaluated by the analysts and that any noted indications were being reported as required.

Primary Analysis

Steam Generator A

Row	Column	Row	<u>Column</u>
104	119	100	118
109	116	110	115
113	113	113	114
114	111	149	20
96	127	85	68
135	76	135	74
135	64	135	63
135	62	135	61
135	60	135	59

Secondary Analysis

Steam Generator A

Row	Column	Row	<u>Column</u>
103	8	103	7
104	8	103	2
103	3	103	4
103	5	103	6
103	9	103	10
103	11	77	37
77	38	77	39
77	40	77	41
27	37	27	38
27	52	27	56
28	53	28	48

- (c) Certification records of EC calibration standards 49154 and 49155 were reviewed for material type, correct fabrication, and artificial flaw location/size.
- (3) The inspectors observed the in-process PT examinations indicated below. The observations were compared with the applicable procedure and the ASME B&PV Code in the following areas: specified method, penetrant materials identified; penetrant materials analyzed for halogens and sulfur; acceptable pre-examination surface; surface temperature; surface drying time prior to penetrant application; method of penetrant application; penetrant dwell time; method used for excess penetrant removal; surface drying prior to developing, if applicable; type of developer; examination technique; evaluation technique; and, reporting of examination results.

Item No.	Weld No.	
B10.010.001	2-53A-H8B 2-53A-9-17	

The inspectors reviewed the below listed liquid penetrant materials certification records to ascertain if the sulfur and halogen content of the material was within acceptable content limits.

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Materials	Batch No.	
Liquid Penetrant	87K043	
Cleaner/Remover	890011	
Developer	89B05K	

(4) The inspectors reviewed documentation indicating that a 10 pound lift test had been performed on magnetic particle alternating current (AC) yoke OC-QA-182. The certification record for lift test plate SYCNT-11016 was reviewed to confirm the weight of the test plate.

A review of the magnetic particle material certification record for batch number 88G001 indicated the sulfur and halogen content of the material was within acceptable content limits.

(5) Verification Of Visual Examinations

The NRC inspectors conducted an independent visual examination of the pipe supports tabulated below. This examination was conducted in order to evaluate the adequacy of the examination procedure being used by the licensee and to assess the validity of the information being reported by the visual examiners. These re-examinations generally agreed with the findings of the visual examiners.

Item No.	Component ID
F1.03.265	2-03A-1-0-1400A-H32/R3
F1.03.305	2-03A-1-0-1400A-H33/R2
F1.03.264	2-03A-1-0-1400A-SR103/R0
F1.03.178	2-03A-1401A-GC-0905/R1
F1.03.135	2-03A-1-0-1401A-SR28/R1
F1.03.179	2-03A-1-0-1401A-SR31/R7
F1.03.177	2-03A-1-0-1401A-SR33/R3
F1.03.142	2-03A-1401B-DE007/R0
F1.03.143	2-03A-1-0-1401B-SR16/R2
F1.03.141	2-03A-1-0-1401B-SR17/R5
F1.03.436	2-07A-0-1400A-H10/R0

1.03.392	2-07A-0-1400A-H16/R4
1.03.433	2-07A-0-1402A-H40/R0
1.03.391	2-07A-6-0-1400A-H60/R3
-1.03.390	2-07A-6-0-1400A-H65/R4
-1.03.393	2-07A-6-0-1400A-H68/R1
-1.03.394	2-07A-6-0-1400A-H69/R2
-1.03.431	2-07A-0-1402A-R13/R2
F1.03.374	2-07A-0-1400A-SR25/R0
-1.02.072	2-01A-0-1481A-H3A/R0
F1.01.133	53A-0-1478A-H3A/RD2

(6) The inspectors evaluated the below listed radiographic films for these Main Steam pipe welds which were radiographed under the licensee's ISI program. These films were evaluated in order to determine if the radiographic quality was in accordance with the applicable procedure and ASME Code requirements and to specifically verify the following: penetrameter type, size, and placement; penetrameter sensitivity; film density and density variation; film identification; film quality; weld coverage; and, disposition of the welds radiographed.

Item No.	Weld No.	Film Reviewed
C05.021.101	2-01A-MS1A-B	0-1, 1-2, 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-0
CO5.021.122	2-01A-MS5B-A	0-1, 1-2, 2-3, 3-4, 4-5, 5-6, 6-7, 7-0
C05.021.122L C05.021.101L	2-01A-MS5B-AL 2-01A-MS1A-BL	0-1 0-1

The inspector confirmed the calibration status for Densitometer OCOA199.

(7) The inspectors reviewed the qualification documentation for the below listed examiners in the following areas: employer's name; person certified; activity qualified to perform; effective period of certification; signature of employer's designated representative; basis used for certification; and, annual visual acuity, color vision examination, and periodic recertification.

Company	Examiner	<u>Method-Level</u>
Company DPC DPC B&W B&W B&W DPC DPC ZETEC ZETEC ZETEC ZETEC DPC DPC DPC DPC DPC DPC DPC DPC	Examiner MWB WKD JMB CRH DEH RLN TMB MBT CRB MJK KJN TBA TLT DLP RR DLO WCL	Method-Level EC IIA EC II EC II EC II EC II VT-1 II VT-3/4 II
DPC DPC DPC DPC DPC DPC DPC DPC DPC DPC	DLO WCL AEB TRB ADG CHM GJM DLR JWS JWR RPB GGB HAD	VI-3/4 II VT-3/4 II VT-3/4 II VT-3/4 II MT II/PT II MT II/PT II PT II PT II PT II/UT II PT II/MT II PT II/UT II RT II
DPC DPC DPC DPC DPC	WGR DWB MTW DLR	RT II UT II UT I UT I UT II

- d. Data Review and Evaluation, Unit 2 (73755)
 - (1) Records of completed nondestructive examinations were selected and reviewed to ascertain whether: the methods(s), technique, and extent of the examination complied with the ISI plan and applicable NDE procedures; findings were properly recorded and evaluated by qualified personnel; programmatic deviations were recorded as required; personnel, instruments, calibration blocks, and NDE materials (penetrants, couplants) were designated. Records selected for this review are listed below.

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Item No.	Weld/Component ID NDE N	lethod
B05.021.001	2PZR-WP91-1	РТ
B05.021.002	2PZR-WP91-2	PT
B05_021_003	2P7R-WP91-3	PT
B05 050 008B	2PDB2-2	PT
B07 020 004	2P7R-RELIEF-A	VT-1
507.020.004		••• -
PO7 020 005		VT-1
607.020.005		V I - 1
DOT 000 000		VT-1
807.020.006	AC NUTE & O STUDE	AI-T
		мт
808.020.004	2PZR-WP8Z-YZ	
B08.020.008	2PZR-WP82-WX	Mil
B09.021.004	2PSP-12	P !
B09.021.006	2PSP-21	PT
B09.021.007	2PSP-22	PT
B09.021.031	2-50-7.1-30	PT
B09.021.032	2-50-7.1-34	PT
B09.021.038	2-51A-35.1-101	PT
B09.032.007	2PDB1-10	MT
809.032.008	2PDB2-10	MT
C_{02} 010 003	21 PCB-INI FT	РТ
03 040 054	2-53B-R11	PT
	2-538-17 2-25	PT
	2_53B_17 2_79A	PT
	2-53B-17 $1-101$	PT
C05.011.021	2 = 530 = 17.4 = 101	DT
	2-03D-10.1-40 2 010 MC1A P	мт
CO5.021.101A	2 OIA MCER A	MT
CU5.U21.122A		וינו הד
05.021.101	2-UIA-MSIA-B	KI DT
05.021.122	2-01A-MS5B-A	K I
C05.021.122L	2-01A-MS5B-AL	KI DT
C05.021.101L	2-01A-MSIA-BL	KI
B05.050.008	2PDB2-2	UT
B05.050.008A	2PDB2-2	UT
C01.030.005	2LPCB-SH-TUBE	UT
C05.021.003	2-53A-9-17	UT
F1.03.265	2-03A-1-0-1400A-H32/R3	VT-3/4
F1.03.305	2-03A-1-0-1400A-H33/R2	VT-3/4
F1.03.264	2-03A-1-0-1400A-SR103/R0	VT-3/4
F1.03.178	2-03A-1401A-GC-0905/R1	VT-3
F1.03.135	2-03A-1-0-1401A-SR28/R1	VT-3
F1.03.179	2-03A-1-0-1401A-SR31/R7	VT-3
F1 03 177	2-03A-1-0-1401A-SR33/R3	VT-3
F1 03 142	2-03A-1401B-DF007/R0	VT-3
F1 03 143	2_034_1_0_1401B_SR16/R2	VT-3
11.03.143	2_03A_1_0_1401B_5R10/R2	VT-3
E1 03 136	2_07A_0_1/00A_H10/D0	VT-3/4
F1.03.430 F1.03.202	2 07A 0 1400A U16/DA	VT_2/4
FI.U3.392	2-0/8-0-14008-010/84	1-3/4

F1.03.433	2-07A-0-1402A-H40/R0	VT-3/4
F1.03.391	2-07A-6-0-1400A-H60/R3	VT-3/4
F1.03.390	2-07A-6-0-1400A-H65/R4	VT-3/4
F1.03.393	2-07A-6-0-1400A-H68/R1	VT-3/4
F1.03.394	2-07A-6-0-1400A-H69/R2	VT-3/4
F1.03.431	2-07A-0-1402A-R13/R2	VT-3
F1.03.374	2-07A-0-1400A-SR25/R0	VT-3
F1.02.072	2-01A-0-1481A-H3A/R0	VT-3/4
F1.01.133	53A-0-1478A-H3A/RD2	VT-3/4

(2) The inspectors reviewed the eddy current data analysis results and a sample of associated completed records for approximately 50 SG A and B tubes. The reviews were compared with the applicable procedures and the ASME B&PV Code in the following areas: the multichannel eddy current examination equipment has been identified; material permeability has been recorded; method of examination has been recorded; and, results are consistent with acceptance criteria.

The inspectors compared randomly selected current examination results with historical examination results. No significant discrepancies were noted.

By the conclusion of the NRC inspection all EC examinations had not been completed. The final examination results will be reported to the NRC in accordance with TECH SPEC requirements. Preliminary results of the EC examinations of SG's A and B indicate that 3 tubes in each of the 2 steam generators will require plugging in accordance with the applicable acceptance criteria.

In the areas inspected, violations or deviations were not identified.

3. Independent Inspection

While the inspectors conducted the visual examination verification on the pipe supports identified in paragraph 2.c.(5) above, it was noted that five supports had discrepancies when compared to the as-built drawings. Four supports appeared to have original construction deficiencies and one support had a bent member which could be either an original construction deficiency or a service induced deficiency. The five supports with their associated discrepancies are listed below. These discrepancies are additional examples of the discrepancies identified in Violation 50-269, 270, 287/87-31-01, As-Built Drawing Discrepancies Compared With As-Built Conditions, which is still pending licensee resolution.

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	Item No.	Support No.	Discrepancy
(1)	F1.03.265	2-03A-1-0-1400A-H32/R3	Support 2-03A-1-0-1400A-H33 is attached to the same common channels. This common attachment is not shown on the drawing.
(2)	F1.03.135	2-03A-1-0-1401A-SR28/R1	Four welds at two horizontal members connected to a column and both ends of an inner vertical member are welded on two sides only. The drawing indicates these members should be welded all around.
(3)	F1.03.391	2-07A-6-0-1400A-H60/R3	Snubber is not perpendicular to the pipe. The drawing does not show the snubber in an offset position.
(4)	F1.03.374	2-07A-0-1400A-SR25/R0	The outer vertical member is bent.
(5)	F1.01.133	53A-0-1478A-H3A/RD2	Support 53A-0-1478A-GPD-0101 is on the same line and 11" west of 53A-0-1478A-H3A. Support 53A-0-1478A-GPD-0101 has been omitted from the isometric drawing.

Within this area of inspection, no violations or deviations were identified.

- 4. Action on Previous Inspection Findings (92701)
 - a. (Closed) UNR 50-269/88-23-04, Pipe Support Discrepancies Between the As-Built Drawings and Field Conditions.

This matter concerned the discrepancies found in as-built drawings such as insufficient weld sizes, members that require removal not having been removed, and the installed base plate thickness being less than required. The inspectors held discussions with the responsible licensee's engineer and reviewed the commitment for corrective action. In the response, the licensee stated that all of the supports identified in the inspection report with discrepancies had been reviewed and found to be operable in their existing condition and that drawings and calculations had been revised to reflect the actual condition in the field and the items were requalified if required. The inspectors sampled the revised drawings and calculations to verify the licensee commitments in the response. These reviews of revised

drawings and calculations were acceptable and this item is considered closed.

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b. (Closed) UNR 50-269/88-23-05, Inadequate Pipe Support Calculations.

This matter concerned inadequate qualifications on pipe support calculations due to joint release on the computer model, the wrong allowables being used for anchor bolt size, and dimension and load analysis being inadequate. The inspectors held discussions with the responsible licensee's engineer and reviewed the commitment for corrective action. In the response, the licensee stated that all of the support calculations identified in the inspection report with discrepancies had been revised and the supports remained acceptable. The inspectors sampled the revised calculations to verify the licensee commitments in the response. The reviews of the revised calculations were acceptable and this item is considered closed.

5. Exit Interview

The inspection scope and results were summarized on June 9, 1989, with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed in detail the inspection results. Dissenting comments were not received from the licensee.

6. Acronyms and Initialisms

AC	-	Alternating Current
ASME	-	American Society of Mechanical Engineers
B&PV	-	Boiler and Pressure Vessel
B&W	-	Babcock and Wilcox
Col	-	Column
DAC	-	Distance Amplitude Curve
DC	-	Direct Current
DPC	-	Duke Power Company
EC	-	Eddy Current
ID	-	Identification
ISI	-	Inservice Inspection
KB	-	Krautkramer/Branson
MT	-	Magnetic particle
MH_	-	Megahertz
NDÉ		Nondestructive Examination
No.	-	Number
NRC	-	Nuclear Regulatory Commission
OTSG	-	Once Through Steam Generator
PT	-	Liquid penetrant
QA	-	Quality Assurance
QC	-	Quality Control
R	-	Revision
RT	-	Radiographic Test
SG	-	Steam Generator
TFC	-	Temporary Field Change





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UNR - Unresolved Item UT - Ultrasonic VT - Visual مترجع والمرور والمساع

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