1RE02 INSERVICE INSPECTION SUMMARY REPORT FOR WELDS AND COMPONENT SUPPORTS

of the

SOUTH TEXAS PROJECT

ELECTRIC GENERATING STATION - UNIT 1

P.O. Box 289

Wadsworth, Texas 77483

Owner: Houston Lighting and Power Company
City Public Service Board of San Antonio
Central Power and Light Company
City of Austin

Address: P.O. Box 1700
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Commercial Operation: August 25, 1988

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1RE02 INSERVICE INSPECTION SUMMARY REPORT

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SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

UNIT NO. 1

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3.0 COMPONENT SUPPORT EXAMINATIONS

1.0 1RE02 SUMMARY REPORT

1.1 Introduction

This Summary Report describes Houston Lighting & Power Company's (HL&P) inservice inspection (ISI) of selected Class 1, 2, and 3 components of the South Texas Project Electric Generating Station, Unit 1 (STPEGS-1) which was performed from March 29 to May 29, 1990 in conjunction with the second refueling outage (1RE02). The ISI summarized herein constitutes the second ISI performed during the first inspection period of the first inspection interval of STPEGS-1. The STPEGS-1 ISI program is scheduled in accordance with Program B of the American Society of Mechanical Engineers (ASME) Section XI Code, "Inservice Inspection of Nuclear Power Plant Components". The first ten year inspection interval of STPEGS-1 extends to August 25, 1998. The first inspection period, which is of three years duration beginning with commercial operation, extends to August 25, 1991. The ISI examinations performed up through 1RE02 partially satisfy the ASME Section XI Code completion requirements for the first inspection period.

The STPEGS-1 ISI program for the first inspection interval is described in the Ten Year ISI Plan previously filed with the Nuclear Regulatory Commission (NRC) and the State of Texas. The STPEGS-1 ISI program was developed and is being implemented in accordance with 10CFR50.55a, the 1983 Edition of Section XI Code with the Summer 1983 Addenda, and other regulatory documents and Section XI Code Cases as specified in the Ten Year ISI Plan. This Summary Report satisfies the reporting requirements of IWA-6000 of the Section XI Code for welds and component supports.

1.2 Scope of Summary Report

This Summary Report describes the ISI examinations performed during 1RE02 on welds (Section 2) and component supports (Section 3). Each of these sections describes the scope of examinations performed; describes the personnel, procedures, and equipment utilized for the examinations; provides a summary of the examinations, examination results, and corrective actions; and includes copies of the examination certification (NIS-1) forms.

The ISI performed on Class 1 and 2 welds and components (e.g., bolting) within the Welds Program are described in Section 2 of this Summary Report. These examinations were performed in accordance with Subsections IWB and IWC of Section XI and other bases as specified in the Ten Year ISI Plan. The ISI performed on Class 1, 2, and 3 component supports and Class 3 integral attachments are described in Section 3. These examinations were performed in accordance with Subsection IWF (Class 1, 2, and 3 supports) and Subsection IWD (Class 3 integral attachments) of Section XI and other bases as specified in the Ten Year ISI Plan.

2.0 WELD EXAMINATIONS

2.1 Introduction

ISI of Class 1 and 2 welds and components within the Welds Examination Program was performed between March 29 and May 5, 1990. These examinations constitute the second ISI of the first inspection interval for the Welds Examination Program.

This section of the Summary Report documents the examinations performed by Southwest Research Institute (SwRI) and HL&P Quality Control (QC) nondestructive examination (NDE) personnel in accordance with the following documents:

(1) "First 10-Year Long-Term Inservice Examination Plan for the South Texas Project Electric Generating Station, Unit 1" (LTP),

(2) "Examination Plan for the 1990 - 1RE02 Inservice Inspection at the South Texas Project Electric Generating Station, Unit 1" including changes made during the outage (Outage Plan).

The Long-Term Plan (LTP) provides a detailed description of the rules for exemption, selection, allocation, and scheduling of Class 1 and 2 welds and examination areas for ISI. The 1990 Examination Plan is an individual Outage Plan for implementing ISI weld examinations as scheduled in the LTP. The Outage Plan contains the applicable operating procedures (OP) and nondestructive testing (NDT) procedures used for the examinations.

2.2 Scope of Examinations

NDE was performed on a total of seventy-seven (77) selected Class 1 and Class 2 components and examination areas as contained in the Outage Plan. Selection of these components and examination areas was based on the LTP allocation and scheduling requirements for the second refueling outage. In addition, some selected welds and/or examination areas were either replaced with alternate selections or deferred to a later outage due to component support interference or inaccessibility. These deviations from the LTP were documented as Examination Plan Changes to the Outage Plan.

These examinations constitute approximately ten (10) percent of the total number of components and examination areas required to be examined during the first inspection interval. When combined with the examinations performed during the first refueling outage (1RE01), approximately twenty (20) percent of the total number of components and examination areas required to be examined during the first inspection interval have been examined.

Class 1

A total of forty-one (41) examinations were performed on the following Class 1 components and examination areas:

Vessels
Reactor Pressure Vessel (Bolting)
Pressurizer
Steam Generators (Primary Side)

Piping
Reactor Coolant System
Chemical and Volume Control System
Residual Heat Removal System
Safety Injection System

Class 2

A total of thirty-six (36) examinations were performed on the following Class 2 components and examination areas:

Piping
Containment Spray System
Main Steam System
Safety Injection System

Pumps
High Head Safety Injection Pump 1A
Low Head Safety Injection Pump 1A

A complete list of the components and examination areas is contained in Appendix 2-A. Class 1 and Class 2 weld identification figures for the above components and examination areas are contained in the LTP.

2.3 Personnel, Procedures, and Equipment

2.3.1 Personnel Qualifications

The examination personnel have been trained and qualified in accordance with Section XI. In addition, Level II examiners performing ultrasonic examinations on austenitic piping welds were qualified by Electric Power Research Institute in detection of intergranular stress corrosion cracking. A list of all personnel who performed examinations during

1RE02 is contained in Appendix 2-B

2.3.2 Examination Procedures

NDE activities were performed using visual (VT), liquid penetrant (PT), magnetic particle (MT), and ultrasonic (UT) techniques. SwRI personnel performed all examinations (UT, MT, PT, and VT) on the reactor pressure vessel (RPV) bolting and all other UT examinations in accordance with SwRI NDT procedures approved by HL&P. HL&P QC NDE personnel performed all MT, PT, and VT examinations (excluding those required for the RPV bolting) in accordance with HL&P QC NDT procedures.

The NDT procedures were written to conform to the requirements of the applicable sections of the ASME Code. Any deviations from ASME Code requirements are noted within the procedure. Some of the SwRI procedures were amended for specific examination purposes with deviations. All NDT procedures and deviations were submitted to and approved by the Authorized Nuclear Inservice Inspector (ANII). A list of the applicable NDT procedures is provided in Appendix 2-C.

SwRI OP's were utilized to provide guidelines and controls for performance of on site activities. This included procedures for weld joint indentification marking, indication recording, records control, data comparison, and resolution of indications. A list of the applicable OP's is provided in Appendix 2-C.

2.3.3 Equipment

Various equipment was used during the ISI to perform the examinations of the selected component welds and examination areas. Major equipment consisted of the following:

Sonic FTS Mark I ultrasonic instruments
Ultrasonic transducers
AC electromagnetic yokes
MT calibration block
Pyrometers
Black light meters
Pressure gauges

A list of all major equipment used during the 1RE02 ISI is contained in Appendix 2-B.

2.3.4 Materials

NDE materials utilized during 1RE02 weld examinations included penetrant and magnetic particle materials, ultrasonic couplant, and marking pencils. All materials contacting an austenitic examination surface were tested and certified to be within acceptable sulfur and halogen limits specified in the STPEGS Expendable Material Control Program. A list of these material and traceability numbers is included in Appendix 2-B.

2.3.5 Calibration Blocks

Pipe, vessel, and bolting calibration blocks were utilized to calibrate the UT instruments prior to examination of the selected welds. Applicable calibration blocks are noted in the Examination Summary Tables (Appendix 2-A). Drawings for all calibration blocks are included in the LTP.

2.4 Summary of Examinations

2.4.1 Examination Methods

The following examination methods were conducted in accordance with HL&P approved SwRI NDT procedures and/or HL&P QC NDT procedures:

VT Examinations

VT-1 examinations were performed on RPV closure washers, Steam Generator Manway Bolting (Primary Side), and Class 1 flange bolting.

PT Examinations

PT examinations were performed on RPV closure studs, Class 1 and 2 piping welds, and Class 2 pump casing welds.

MT Examinations

MT examinations were performed on the RPV closure studs and nuts and Class 2 piping welds.

UT Examinations

UT examinations were performed on Class 1 and 2 components, including RPV closure studs and nuts, vessels, austenitic piping, and ferritic piping. Various techniques were used to perform the UT examinations, depending on classification, material type, and weld thickness.

2.4.2 Augmented Examinations

In addition to the ISI requirements of Section XI for Class 1 piping and ASME Code Case N-408 for Class 2 piping, the following augmented ISI program was implemented during this outage:

Augmented ISI - IE Bulletin 79-17

This augmented program is described in the SwRI LTP and the affected examination areas are noted in the "Remarks" column of the Examination Summary Tables.

2.4.3 Data Comparison

In accordance with IWB-3121 of Section XI, the examination results were compared with the recorded NDE results of the preservice inspection (PSI). There were no prior inservice examinations on the areas examined during this outage.

2.4.4 Additional and Successive Examinations

Additional VT examinations were performed on the bolting of the Steam Generator (SG) primary manways due to indications (evidence of leakage) observed during VT of the primary manway bolting of SG 1A (see Section 2.5 of this report). In accordance with IWB-2430, additional examinations were required for the manway bolting on at least one other SG. However, additional examinations were performed on the primary manway bolting of the remaining SG's rather than only one. Since the first expansion of additional examinations included the remaining SG primary manway bolting, no second expansion was required.

Successive examinations are required if flaw indications are evaluated in accordance with IWB-3122.4. Since the visual indications on the SG primary manway bolting are not considered flaws, no successive examinations are required.

No other additional examinations (IWB-2430 or IWC-2430) were required during this outage. No other successive examinations (IWB-2420 or IWC-2420) will be scheduled as a result of examinations performed during this outage.

2.5 Examination Results and Corrective Actions

Examination area coverage was provided, to the extent practical, in accordance with the requirements of ASME Section XI and Code Case N-408. In those cases where physical conditions of the component restricted examination of the required area, a calculation was

performed to estimate the amount of coverage achieved. Appendix 2-D, ISI Examination Limitations, contains a detailed account of all examination limitations (UT, PT, and MT) encountered during 1RE02 weld examinations.

All UT indications determined to be recordable, regardless of signal amplitude, were investigated by SwRI to determine the nature of the reflector.

No reportable indications were detected by surface (PT and MT) examinations.

VT examination of SG 1A primary manway bolting revealed evidence of leakage (presence of boron crystals on portions of the mating surface and on some bolts) at both the inlet and outlet manways which was reported on Request for Action (RFA) No. 90-0099. Additional examinations were scheduled on the bolting of the remaining SG primary manways (1B, 1C, and 1D). Evidence of leakage (boron crystals) was observed on the inlet manway of SG 1B and outlet manway of SG 1C and reported on RFA No. 90-1109 as potentially nonconforming conditions. Evaluation of the findings documented in these RFA's by the Design Engineering Department concluded that the conditions were acceptable and no further action was taken.

During preparatory visual examination of RPV Studs prior to surface examinations, minor pitting was observed in the threaded area of RPV Stud 1A. The pitting was documented on a rollout drawing of the threads and reported on RFA No. 90-1126. Evaluation of the findings documented in this RFA by the Design Engineering Department concluded that this condition was acceptable and no further action was taken. No pitting was observed on the other eleven (11) RPV studs that were examined during this outage.

2.6 Certification of Inspections

ASME Section XI NIS-1 forms, "Owner's Report for Inservice Inspections", have been prepared to certify the STPEGS-1 weld ISI examinations described in this section of the Summary Report. The STPEGS-1 weld ISI examinations have been certified by our ANII, Factory Mutual Systems, on the NIS-1 forms included in Appendix 2-E.

APPENDIX 2-A

SUMMARY OF EXAMINATIONS

REACTOR PRESSURE VESSEL

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O G T O E H C M R	REMARKS **CALIBRATION BLOCK**
	CLOSURE HEAD BOLTING (FIG NO A-RPV-2, 3)					
D05300	CLOSURE NUTS	B-G-1 B6.10	MT	300-2/43	X - -	EXAMINED NUT NOS. 1A, 4A, 7A, 10A, 13A, 16A, 19A, 22A, 25A, 28A, 31A, AND 34A. UT WAS PERFORMED AS A SUPPLEMENTAL EXAMINATION OF THE THREADED AREA. LIMITED UT43 ON THE NUTS DUE TO SPANNER WRENCH SLOTS. **CS-66**
			UT0	600-19/35	X - -	
			UT43		X - -	
D05400	CLOSURE STUDS	B-G-1 B6.30	PT	200-5/3	X - -	EXAMINED STUD NOS. 1A, 4A, 7A, 10A, 13A, 16A, 19A, 22A, 25A, 28A, 31A, AND 34A. RFA NO. 901126 DOCUMENTS PITTING IN THE THREADED AREA OF STUD 1A. FINAL DISPOSITION OF STUD 1A WAS USE-AS-IS. LIMITED UT OF THE LUGS DUE TO STUD CONFIGURATION. **CS-45A/CS-65B**
			MT	300-2/43	X - -	
			UT45	800-22/3	X - -	
			UT60		X - -	
			UT88	800-109/3	X - -	
D05600	CLOSURE HEAD WASHERS	B-G-1 B6.50	VT-1	900-7/15	X - -	EXAMINED WASHER NOS 1A, 4A, 7A, 10A, 13A, 16A 19A, 22A, 25A, 28A, 31A, AND 34A.

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION UNIT 1
INSERVICE INSPECTION SUMMARY
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (1990)
CLASS 1 COMPLETED COMPONENTS

PRESSURIZER

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	O G E O M	O T H E R	REMARKS **CALIBRATION BLOCK**
	CIRCUMFERENTIAL WELDS (FIG NO A-PRZ-1)							
D10100	PRZ-1-C1	B-B	UTOW	600-49/3	X	-	-	LIMITED UT FROM THE SHELL SIDE DUE TO
	UPPER HEAD TO SHELL A	B2.11	UT45	600-15/73	X	-	-	PROXIMITY OF PERMANENT PIPE SUPPORTS AND
			UT45T		X	-	-	3/4" INSTRUMENTATION LINES.
			UT60		-	X	-	
			UT60T		X	-	-	**CSCL-36**
	LONGITUDINAL WELDS (FIG NO A-PRZ-1)							
D10300	PRZ-1-L1	B-B	UTOW	600-49/3	X	-	-	EXAMINED 1 FT. OF WELD INTERSECTING WITH
	SHELL A LONGITUDINAL WELD	B2.12	UT45	600-15/73	X	-	-	PRZ-1-C1.
			UT45T		X	-	-	
			UT60		X	-	-	
			UT60T		X	-	-	**CSCL-36**

STEAM GENERATOR 1A (PRIMARY SIDE)

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	G E N	O T H E R	REMARKS **CALIBRATION BLOCK**
	HEAD WELDS (FIG NO A-SG-1)							
D15000	SG-1A-SR1 CHANNEL HEAD CAP TO SUPPORT RING	B-B B2.31	UTOW UT45 UT45T UT60 UT60T	600-49/3 600-15/73	X X X X X	- - - - -	- - - - -	NO UT FROM THE SUPPORT RING SIDE DUE TO SUPPORT RING CONFIGURATION. LIMITED UT45 AND UT60 FROM THE HEAD SIDE DUE TO PROXIMITY OF INLET AND OUTLET NOZZLE WELDS. **CSCL-36**
D15100	SG-1A-SR2 SUPPORT RING TO TUBE PLATE	B-B B2.40	UTOW UT45 UT45T UT60 UT60T	600-49/3 600-15/73	X - X - X	- X - X -	- - - - -	NO UT FROM THE SUPPORT RING SIDE DUE TO SUPPORT RING CONFIGURATION. LIMITED UT45 AND UT60 FROM THE TUBE PLATE SIDE DUE TO PROXIMITY OF WELDED PLATES. **CSCL-36**
	NOZZLE TO VESSEL LOWER HEAD WELDS (FIG NO A-SG-1)							
D15200	SG-1A-IN INLET NOZZLE TO CHANNEL HEAD CAP	B-D B3.130	UTOW UT45 UT45T UT60 UT60T	600-49/3 600-15/73	X X X X X	- - - - -	- - - - -	LIMITED UTOW, UT45, AND UT60 FROM THE HEAD SIDE DUE TO PROXIMITY OF WELD SR1 AND VIBRATION SENSOR INSTRUMENTATION BOX. **CSCL-36**
D15300	SG-1A-ON CHANNEL HEAD CAP TO OUTLET NOZZLE	B-D B3.130	UTOW UT45 UT45T UT60 UT60T	600-49/3 600-15/73	X X X X X	- - - - -	- - - - -	LIMITED UTOW, UT45 AND UT60 FROM THE HEAD SIDE DUE TO PROXIMITY OF WELD SR1 AND VIBRATION SENSOR INSTRUMENTATION BOX. **CSCL-36**
	NOZZLE INSIDE RADIUS SECTION (FIG NO A-SG-1)							
D15400	SG-1A-IN-IR INLET NOZZLE INSIDE RADIUS SECTION	B-D B3.140	UT28	600-11/46	X	-	-	**CSCL-41**

STEAM GENERATOR 1A (PRIMARY SIDE)

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	NOR EC	OGE OHR	OTN ER	REMARKS **CALIBRATION BLOCK**
	NOZZLE INSIDE RADIUS SECTION (FIG NO A-SG-1)							
015500	SG-1A-ON-IR OUTLET NOZZLE INSIDE RADIUS SECTION	B-D B3.140	UT28	600-11/46	X	-	-	**CSCL-41**
	MANWAY BOLTING (FIG NO A-SG-1)							
015800	SG-1A-IMB INLET MANWAY BOLTING	B-G-2 B7.30	VT-1	NDEP 9.3 R0	-	-	X	EXAMINED NOS. 1 - 16. EVIDENCE OF COOLANT LEAKAGE WAS DETECTED. RFA NO. 900099 WAS ISSUED FOR THIS INDICATION. THIS CONDITION WAS EVALUATED BY ENGINEERING AND ACCEPTED AS-IS.
015900	SG-1A-OMB OUTLET MANWAY BOLTING	B-G-2 B7.30	VT-1	NDEP 9.3 R0	-	-	X	EXAMINED NOS. 1 - 16. EVIDENCE OF COOLANT LEAKAGE WAS DETECTED. RFA NO. 900099 WAS ISSUED FOR THIS INDICATION. THIS CONDITION WAS EVALUATED BY ENGINEERING AND ACCEPTED AS-IS.

STEAM GENERATOR 1B (PRIMARY SIDE)

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	NO REC	GEN	OTH ER	REMARKS **CALIBRATION BLOCK**
	MANWAY BOLTING (FIG NO A-SG-2)							
D16800	SG-1B-INB INLET MANWAY BOLTING	B-G-2 B7.30	VT-1	NDEP 9.3 [illegible]	-	-	X	EXAMINED NOS. 1 - 16. EVIDENCE OF COOLANT LEAKAGE WAS DETECTED. RFA NO. 901109 WAS ISSUED FOR THIS INDICATION. THIS CONDITION WAS EVALUATED BY ENGINEERING AND ACCEPTED AS-IS.
D16900	SG-1B-OMB OUTLET MANWAY BOLTING	B-G-2 B7.30	VT-1	NDEP 9.3 RO	X	-	-	EXAMINED NOS. 1 - 16.

STEAM GENERATOR 1C (PRIMARY SIDE)

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	NOREC	GEOM	OTHER	REMARKS **CALIBRATION BLOCK**
	MANWAY BOLTING (FIG NO A-SG-1)							
D17800	SG-1C-IMB INLET MANWAY BOLTING	B-G-2 B7.30	VT-1	NDEP 9.3 R0	X	-	-	EXAMINED NOS. 1 - 16.
D17900	SG-1C-OMB OUTLET MANWAY BOLTING	B-G-2 B7.30	VT-1	NDEP 9.3 R0	-	-	X	EXAMINED NOS. 1 - 16. EVIDENCE OF COOLANT LEAKAGE WAS DETECTED. RFA NO. 901109 WAS ISSUED FOR THIS INDICATION. THIS CONDITION WAS EVALUATED BY ENGINEERING AND ACCEPTED AS-IS.

STEAM GENERATOR 1D (PRIMARY SIDE)

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	G E N	O T H E R	REMARKS **CALIBRATION BLOCK**
	MANWAY BOLTING (FIG NO A-SG-2)							
D18300	SG-1D-IMB INLET MANWAY BOLTING	B-G-2 B7.30	VT-1	NDEP 9.3 RO	X	-	-	EXAMINED NOS. 1 - 16.
D18900	SG-1D-OMB OUTLET MANWAY BOLTING	B-G-2 B7.30	VT-1	NDEP 9.3 RO	X	-	-	EXAMINED NOS. 1 - 16.

REACTOR COOLANT SYSTEM

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	G E O M	C T H E R	REMARKS **CALIBRATION BLOCK**
	12-RC-1112-BB1 (FIG NO A-RC-8)							
102040	2	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO ELBOW	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-21
102090	7	B-J	PT	NDEP 6.2 R2	X	-	-	
	ELBOW TO PIPE	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-21
102130	11	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO VALVE	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-21
	12-RC-1125-BB1 (FIG NO A-RC-9)							
102250	3	B-J	PT	NDEP 6.2 R2	X	-	-	
	ELBOW TO PIPE	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-21
102350	13	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO BRANCH CONNECTION	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-21
	8-RC-1114-BB1 (FIG NO A-RC-12)							
103190	1	B-J	PT	NDEP 6.2 R2	X	-	-	NO UT FROM THE VALVE SIDE DUE TO THE
	VALVE TO PIPE	B9.11	UT45	800-114/4	-	X	-	VALVE CONFIGURATION.
			UT45T	DEV 1,2, & 4	X	-	-	
			UT60	800-132/0	-	X	-	
			UT60T	DEV 1	X			**SS-11**

INSERVICE INSPECTION SUMMARY
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (1990)
CLASS 1 COMPLETED COMPONENTS

CHEMICAL AND VOLUME CONTROL SYSTEM

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	G O M	O T H E R	REMARKS "CALIBRATION BLOCK"
	4-CV-1001-BB1 (FIG NO A-CV-1)							
150000	1	B-J	PT	NDEP 6.2 R2	X	-	-	
	VALVE TO PIPE	B9.11	UT45	B00-132/0	X	-	-	
			UT45T	DEV 1	X	-	-	
								SS-6
	2-CV-1124-BB1 (FIG NO A-CV-5)							
152300	4	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO VALVE	B9.21						
152380	8	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO ELBOW	B9.21						
152420	12	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO ELBOW	B9.21						
	2(1.5)-CV-1122-BB1 (FIG NO A-CV-4)							
154880	2	B-J	PT	NDEP 6.2 R2	X	-	-	
	BENT PIPE TO FLANGE (PUMP)	B9.21						
154885	2FB	B-G-2	VT-1	NDEP 9.3 R0	X	-	-	
	FLANGE BOLTING	B7.50						

INSERVICE INSPECTION SUMMARY
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (1990)
CLASS 1 COMPLETED COMPONENTS

RESIDUAL HEAT REMOVAL SYSTEM

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	G O E M	O T H E R	REMARKS **CALIBRATION BLOCK**
	12-RH-1301-BB1 (FIG NO A-RH-3)							
201040	2	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO ELBOW	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-21
201120	6	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO ELBOW	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-21
201180	9	B-J	PT	NDEP 6.2 R2	X	-	-	
	ELBOW TO PIPE	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-21
	10-RH-1308-BB1 (FIG NO A-RH-5)							
202180	3	B-J	PT	NDEP 6.2 R2	X	-	-	
	REDUCING TEE TO PIPE	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-58
202240	6	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO ELBOW	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-58

SAFETY INJECTION SYSTEM

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	G E N	O T H E R	REMARKS **CALIBRATION BLOCK**
	12-SI-1125-BB1 (FIG NO A-SI-1)							
230060	4	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO VALVE	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-21
	8-SI-1327-BB1 (FIG NO A-SI-5)							
231480	5	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO ELBOW	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-10
231520	7	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO ELBOW	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-10
	6-SI-1111-BB1 (FIG NO A-SI-3)							
232060	1	B-J	PT	NDEP 6.2 R2	X	-	-	
	VALVE TO PIPE	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
			UT60	800-132/0	-	X	-	
				DEV 1				**SS-8**
	6-SI-1327-BB1 (FIG NO A-SI-5)							
233100	5	B-J	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO ELBOW	B9.11	UT45	800-114/4	-	X	-	
			UT45T	DEV 1,2, & 4	X	-	-	
								SS-9

CONTAINMENT SPRAY SYSTEM

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	B O R E C	O G E M	T N E X	REMARKS **CALIBRATION BLOCK**
	12-CS-1101-VB2 (FIG NO B-CS-1)							
400040	2LU LONGITUDINAL WELD	C-F-1 C5.12	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - -	- - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **SS-12**
400060	2 PIPE TO ELBOW	C-F-1 C5.11	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - -	- - -	**SS-12**
400080	2LD LONGITUDINAL WELD	C-F-1 C5.12	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - -	- - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **SS-12**
	8-CS-1102-PB2 (FIG NO B-CS-5)							
412390	11 PIPE TO FLANGE	C-F-1 --	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - -	- - -	AUGMENTED ISI - IEB 79-17. **SS-86**
	6-CS-1103-PB2 (FIG NO B-CS-1)							
422260	12LU LONGITUDINAL WELD	C-F-1 --	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - -	- - -	AUGMENTED ISI - IEB 79-17. EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **SS-85**
422270	12 PIPE TO VALVE	C-F-1 --	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - -	- - -	AUGMENTED ISI - IEB 79-17. **SS-85**

MAIN STEAM SYSTEM

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O G T O G N E O E C N R	REMARKS **CALIBRATION BLOCK**
	30-MS-1001-GA2 (FIG NO B-MS-1.2)					
551480	21LU1 LONGITUDINAL WELD	C-F-2 C5.52	MT UT45 UT45T	MDEP 7.1 RO 600-41/19 DEV 2	X - - X - - X - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **CS-5**
551500	21LU0 LONGITUDINAL WELD	C-F-2 C5.52	MT UT45 UT45T	MDEP 7.1 RO 600-41/19 DEV 2	X - - X - - X - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **CS-5**
551520	21 ELBOW TO PIPE	C-F-2 C5.51	MT UT45 UT45T	MDEP 7.1 RO 600-41/19 DEV 2	X - - X - - X - -	**CS-5**
551540	21LD LONGITUDINAL WELD	C-F-2 C5.52	MT UT45 UT45T	MDEP 7.1 RO 600-41/19 DEV 2	X - - X - - X - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **CS-5**
551620	23LU LONGITUDINAL WELD	C-F-2 C5.52	MT UT45 UT45T	MDEP 7.1 RO 600-41/19 DEV 2	X - - X - - X - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **CS-5**
551640	23 PIPE TO PENETRATION	C-F-2 C5.51	MT UT45 UT45T	MDEP 7.1 RO 600-41/19 DEV 2	X - - X - - X - -	**CS-5**
	30-MS-1004-GA2 (FIG NO B-MS-7.0)					
557340	4LU1 LONGITUDINAL WELD	C-F-2 C5.52	MT UT45	MDEP 7.1 RO 600-41/19 DEV 2	X - - X - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **CS-5**

MAIN STEAM SYSTEM

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	G E O M	Q Y N E D	REMARKS **CALIBRATION BLOCK**
	30-MS-1004-GA2 (PIG NO B-MS-7.8)							
557360	4LUD LONGITUDINAL WELD	C-F-2 C5.52	MT UT45	NDEP 7.1 RO 600-41/19 DEV 2	X X	-	- -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **CS-9**
557380	4 ELBOW TO PIPE	C-F-2 C5.51	MT UT45	NDEP 7.1 RO 600-41/19 DEV 2	X X	-	- -	 **CS-9**
557400	4LD LONGITUDINAL WELD	C-F-2 C5.52	MT UT45	NDEP 7.1 RO 600-41/19 DEV 2	X X	-	- -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **CS-9**

SAFETY INJECTION SYSTEM

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	O G E H R	REMARKS **CALIBRATION BLOCK**
	24-SI-1101-UB2 (FIG NO B-SI-1.2)						
700450	BPL1-7 PIPE LUGS	C-C C3.20	PT	NDEP 6.2 R2	X	- -	BPLS WAS REMOVED DURING PSI.
	16-SI-1101-UB2 (FIG NO B-SI-3)						
702960	1LU LONGITUDINAL WELD	C-F-1 C5.12	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - - - - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **SS-30**
703000	1 REDUCER TO PIPE	C-F-1 C5.11	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - - - - -	 **SS-30**
703020	1LD LONGITUDINAL WELD	C-F-1 C5.12	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - - - - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **SS-30**
703120	3LUI LONGITUDINAL WELD	C-F-1 C5.12	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - - - - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **SS-30**
703140	3LUO LONGITUDINAL WELD	C-F-1 C5.12	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - - - - -	EXAMINED 2.5T AT THE INTERSECTING CIRC. WELD. **SS-30**
703160	3 ELBOW TO PIPE	C-F-1 C5.11	PT UT45 UT45T	NDEP 6.2 R2 B00-36/41	X X X	- - - - - -	 **SS-30**

SAFETY INJECTION SYSTEM

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	NOR CHE	GEN OTR	REMARKS **CALIBRATION BLOCK**
	16-SI-1101-UB2 (FIG NO B-SI-3)						
703180	3LD	C-F-1	PT	NDEP 6.2 R2	X	- -	EXAMINED 2.5T AT THE INTERSECTING CIRC.
	LONGITUDINAL WELD	C5.12	UT45	800-36/41	X	- -	WELD.
			UT45T		X	- -	
							SS-30
703240	5	C-F-1	PT	NDEP 6.2 R2	X	- -	
	VALVE TO PIPE	C5.11	UT45	800-36/41	X	- -	
			UT45T		X	- -	
							SS-30
703260	5LD	C-F-1	PT	NDEP 6.2 R2	X	- -	EXAMINED 2.5T AT THE INTERSECTING CIRC.
	LONGITUDINAL WELD	C5.12	UT45	800-36/41	X	- -	WELD.
			UT45T		X	- -	
							SS-30
	12-SI-1101-UB2 (FIG NO B-SI-3)						
709220	1	C-F-1	PT	NDEP 6.2 R2	X	- -	
	BRANCH CONNECTION TO PIPE	C5.11	UT45	800-36/41	X	- -	
			UT45T		X	- -	
							SS-13
709240	1LD	C-F-1	PT	NDEP 6.2 R2	X	- -	EXAMINED 2.5T AT THE INTERSECTING CIRC.
	LONGITUDINAL WELD	C5.12	UT45	800-36/41	X	- -	WELD.
			UT45T		X	- -	
							SS-13
	10-SI-1101-UB2 (FIG NO B-SI-3)						
716660	1	C-F-1	PT	NDEP 6.2 R2	X	- -	AUGMENTED ISI - IEB 79-17.
	BRANCH CONNECTION TO PIPE	--	UTOL	600-49/3	X	- -	
			UT45	800-36/41	X	- -	
			UT45T		X	- -	
							SS-87

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION UNIT 1
INSERVICE INSPECTION SUMMARY
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (1990)
CLASS 2 COMPLETED COMPONENTS

SAFETY INJECTION SYSTEM

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R C	G E O M	O T H R	REMARKS **CALIBRATION BLOCK**
	10-S1-1101-WB2 (FIG NO B-S1-3)							
716680	1LD	C-F-1	PT	NDEP 6.2 R2	X	-	-	AUGMENTED ISI - IEB 79-17. EXAMINED
	LONGITUDINAL WELD	--	UTDL	600-49/3	X	-	-	2.5T AT THE INTERSECTING CIRC. WELD.
			UT45	B00-36/41	X	-	-	
			UT45T		X	-	-	
								SS-87
	2-S1-1106-DB2 (FIG NO B-S1-20)							
746010	2	C-F-1	PT	NDEP 6.2 R2	X	-	-	
	PIPE TO ELBOW	C5.30						
746120	15	C-F-1	PT	NDEP 6.2 R2	X	-	-	
	REDUCER TO PIPE	C5.21	UT45	600-39/10	X	-	-	
			UT45T	DEV 1	X	-	-	
			UT45	B00-36/41	X	-	-	
			UT45T		X	-	-	**SS-22**
	2-S1-1139-DB2 (FIG NO B-S1-21)							
746200	1	C-F-1	PT	NDEP 6.2 R2	X	-	-	
	BRANCH CONNECTION TO PIPE	C5.30						

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION UNIT 1
INSERVICE INSPECTION SUMMARY
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (1990)
CLASS 2 COMPLETED COMPONENTS

HIGH HEAD SAFETY INJECTION PUMPS

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R C	G E M	C T N R	REMARKS **CALIBRATION BLOCK**
	PUMP 1A (FIG NO 8-HHSIP-1)							
751020	SIAPHH-1A-PCW1 FLANGE TO UPPER CASE	C-G C6.10	PT	WDEP 6.2 R2	X	-	-	
751025	SIAPHH-1A-PCW2 UPPER CASE TO LOWER CASE	C-G C6.10	PT	WDEP 6.2 R2	X	-	-	

LOW HEAD SAFETY INJECTION PUMPS

SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC. XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	G E O M	O T H E R	REMARKS **CALIBRATION BLOCK**
	PUMP 1A (FIG NO B-LHSIP-1)							
751325	B1APLH-1A-PCW2	C-G	PT	NDEP 6.2 02	X	-	-	
	UPPER CASE TO LOWER CASE	C6.10						

APPENDIX 2-B

PERSONNEL/EQUIPMENT/MATERIALS

APPENDIX 2-B

PERSONNEL QUALIFICATIONS

Name	Company	UT	MT	PT	VT
Jackson, T. E.	SwRI	II *	II	II	II
Jensen, W. A.	SwRI	II *	II	II	II
Kleinjan, D. R.	SwRI	II *	II	II	II
Kimball K. D.	SSI	I **	-	-	-
Porterfield, C. L.	SSI	I **	I **	I **	-
Smith, D. J.	SSI	II	II	II	II
Pennanen, A. R.	NES	III*	III	III	II
Graham, J. T.	HL&P	***	II	II	II
Hubbard, S. K.	HL&P	***	III	III	III
Halley, J. F.	HL&P	***	II	II	II
Murry, C. A.	HL&P	***	II	II	II
Silva, P.	HL&P	***	II	II	II
Suhler, C. D.	HL&P	***	II	II	II

Company
SwRI - Southwest Research Institute
SSI - Sonic Systems International, Inc.
NES - Nuclear Energy Services
HL&P - Houston Lighting & Power Company

* - IGSCC Qualified by EPRI
** - Level I Trainee
*** - UT Not Performed by HL&P Personnel

APPENDIX 2-B

SwRI MATERIAL AND EQUIPMENT

MATERIAL

Type	Certification Date
Berol Prismacolor Black Pencils #935, Log #2749	26 Feb 90
Berol Prismacolor White Pencils #938, Log #2780	26 Feb 90
Kodak Neutral Gray Card (1/64" Black Line), Log #1766	02 May 83
MT No. 14 AM Prepared Bath, Magnaflux, Batch No. 88M022, Log #2744	01 Jan 89
PT Cleaner PR1, Ardrox, Batch OB130200	09 Apr 90
PT Penetrant P6F2, Ardrox, Batch 9H0108	09 Apr 90
PT Developer D1, Ardrox, Batch 9L0808	21 Mar 90
Sonotrace 40, Batch #8979, Log #2857	11 Jan 90

EQUIPMENT

Brand	Serial No.	Calibration Date
Pyrometer, Amprobe, Fastemp	118	02 Jan 90
Pyrometer, Amprobe, Fastemp	133	02 Jan 90
Pyrometer, Amprobe, Fastemp	159	09 Nov 89
Magnetic Particle Yoke, Parker	612-S	21 Dec 89
Magnetic Particle Yoke, Parker	5839	21 Dec 89
Magnetic Particle Yoke, Whiteline	WL-1-12	27 Mar 90
Magnetic Particle Yoke, Whiteline	WL-1-17	27 Mar 90
Magnetic Particle Yoke, Whiteline	WL-1-19	27 Mar 90
Magnetic Particle Calibration Block, 11.3 lbs	B70198-16	17 Mar 81
Spectroline DM-365X Radiometer	162817	07 Mar 90
Pressure Gauge, US Gauge	PG-10	20 Oct 89
Pressure Gauge, Ashcroft	PG-11	19 Apr 90
Neutral Grey Cards, Kodak (1/64" Black Line)	Log 1766	02 May 83

APPENDIX 2-B

SwRI MATERIAL AND EQUIPMENT, cont'd

EQUIPMENT

Brand	Serial No.	Calibration Date
Sonic FTS MK I	553	01 Mar 90
Sonic FTS MK I	554	10 Jan 90
Sonic FTS MK I	01113E	26 Mar 90
Sonic FTS MK I	01118E	23 Mar 90
Sonic FTS MK I	01119E	21 Mar 90
Sonic FTS MK I	04323E	23 Mar 90
Sonic FTS MK I	04328E	15 Jan 90
Sonic FTS MK I	760524	07 Mar 90
Sonic FTS MK I	760712	20 Mar 90
Sonic FTS MK I	780419	22 Mar 90

APPENDIX 2-B

SwRI MATERIAL AND EQUIPMENT, cont'd

TRANSDUCERS

Brand	Serial No.	Certification Date
Aerotech	015565	29 Nov 89
Aerotech	012905	18 Jul 89
Aerotech	H24833	08 Feb 90
Aerotech	J09165	14 Nov 89
Aerotech	M01907	05 Jan 90
Aerotech	M104	17 Oct 89
SwRI	844	07 Mar 90
SwRI	1802	11 Dec 89
SwRI	1819	07 Mar 90
SwRI	1845	18 Jan 90
SwRI	2043	11 Dec 89
SwRI	2547	06 Mar 90
SwRI	2553	06 Mar 90
SwRI	2787	07 Nov 89
SwRI	2923	06 Mar 90
SwRI	3362	28 Nov 89
SwRI	[illegible]	08 Nov 89
SwRI	345[illegible]	08 Nov 89
SwRI	3673	14 Sep 89
SwRI	3677	14 Sep 89
SwRI	3782	05 Apr 90

APPENDIX 2-B

HL&P MATERIAL AND EQUIPMENT

MATERIAL

Type
PT Cleaner SKC-NF/ZC-7B, Magnaflux, Batch 88A004
PT Cleaner SKC-NF/ZC-7B, Magnaflux, Batch 88F079
PT Penetrant SKL-HF/S, Magnaflux, Batch 87C037
PT Developer SKD-NF/ZP-9B, Magnaflux, Batch 88E035

EQUIPMENT

Brand	Serial No.	Calibration Due Date
Thermometer	100-00520-04	6-09-90
Thermometer	100-00520-10	7-11-90
Thermometer	100-00520-49	6-09-90
Thermometer	100-00520-70	6-26-90
Thermocouple	100-00534-23	8-19-90
Thermocouple	100-00534-29	7-27-90
Thermocouple	100-00534-36	6-12-90
Thermocouple	100-00534-39	8-19-90
MT Yoke, Magnaflux, Y-6	43530	N/A
MT Yoke, Magnaflux, Y-6	Y6-02	N/A
MT Calibration Block	100-04000-02	6-19-90
MT Calibration Block	100-04000-03	6-19-90

APPENDIX 2-C

PROCEDURES

APPENDIX 2-C

SwRI OPERATING PROCEDURES

Procedure No.	Title
IX-FE-101-5 Change 1	Deviations to Nuclear Projects Operating Procedures
IX-FE-103-4	Weld Joint Identification Marking on Nuclear Power Plant Piping
IX-FE-110-4	Black Light Intensity Measurements
IX-FE-116-2	Recording Data from Direct Visual, Liquid Penetrant, and Magnetic Particle Examinations
IX-FE-117-6	Recording Indications During Ultrasonic Examinations of Pressure-Retaining Components and Supports
IX-FE-118-5	Recording Indications During Ultrasonic Examinations of Pressure Vessel Welds
IX-FE-131-0	Comparison of Inservice Examination Data
IX-FE-132-0	Ultrasonic Indication Resolution Procedure
IX-FE-137-0	Ultrasonic Linearity Measurements

APPENDIX 2-C

SwRI NDT PROCEDURES

Procedure No.	Title
SwRI-NDT-200-5/3 Dev. 1	Fluorescent, Water-Washable Liquid Penetrant Examination of Roto-Lok Studs
SwRI-NDT-300-2/43 Dev. 1	Fluorescent Magnetic Particle Examination
SwRI-NDT-600-11/46	Manual Ultrasonic Examination of Nozzle Inner Radius
SwRI-NDT-600-15/73	Manual Ultrasonic Examination of Pressure Vessel Welds
SwRI-NDT-600-19/35 Dev. 1	Manual Ultrasonic Examination of Pressure-Retaining Studs and Bolts Greater Than 2 Inches in Diameter
SwRI-NDT-600-39/10 Dev. 1	Manual Ultrasonic Examination of Small-Diameter Piping Welds
SwRI-NDT-600-41/19 Dev. 2	Manual Ultrasonic Examination of Ferritic Pressure Piping Welds
SwRI-NDT-600-49/3	Manual Ultrasonic Examination Using Longitudinal Wave Straight-Beam Techniques
SwRI-NDT-800-22/3	Manual Ultrasonic Examination of the Pressure-Retaining RPV Studs at the South Texas Project
SwRI-NDT-800-36/41	Manual Ultrasonic Examination of Austenitic Thin Wall Piping Welds

APPENDIX 2-C

SwRI NDT PROCEDURES, cont'd

Procedure No.	Title
SwRI-NDT-800-109/3	Inside Surface Examination of the Access Holes in Pressure-Retaining Studs Greater Than 2 Inches in Diameter
SwRI-NDT-800-114/4 Dev. 1 Dev. 2 Dev. 4	Manual Ultrasonic Examination of Similar and Dissimilar Metal Welds in Austenitic Piping Systems for the South Texas Project
SwRI-NDT-800-132/0 Dev. 1	Manual Ultrasonic Examination of Austenitic Pressure Piping Welds at South Texas Project
SwRI-NDT-900-7/15	Visual Examination of Nuclear Power Plant Components

APPENDIX 2-C

HL&P PROCEDURES

Procedure No.	Title
NDEP 6.2, Rev. 2	Color Contrast Solvent Removable Liquid Penetrant Examination of ASME XI PSI/ISI
NDEP 7.1, Rev. 0	Dry Powder Magnetic Particle Examination for ASME XI PSI/ISI
NDEP 9.3, Rev. 0	ASME XI Examination for VT-1 and VT-3

APPENDIX 2-D

ISI EXAMINATION LIMITATIONS

APPENDIX 2-D

ISI EXAMINATION LIMITATIONS

Table of Contents

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 1
SUMMARY OF INSERVICE EXAMINATION LIMITATIONS

The following tables provide details on the limitations which were encountered during the inservice examinations (ISI) at the South Texas Project Electric Generating Station (STP), Unit 1. Each table of this summary provides the following information as described:

Column 1 - Class/Category/Item No./Examination Requirement

Identifies the ASME Section XI Code Class, Category, Item Number, and Examination Requirement (volumetric or surface) for the specific examination area listed in Column 2. This information is derived from Tables IWB-2500-1 and IWC-2500-1 of the 1983 Edition of ASME Section XI (with Addenda through Summer 1983), and Tables 1 and 2 of Code Case N-408.

Column 2 - Line No./Subassembly
Weld Identification
Weld ID Figure
Weld Configuration
Examination Method

Provides information for each examination area by line number (piping) or subassembly number (vessel), unique weld identification number, SwRI weld ID figure reference, weld configuration (pipe-to-tee, head-to-shell, etc.), and examination method (UT, UT/PT, or UT/MT).

Column 3 - Exam Type

Lists the Methods of Examinations used for each area by specific angles for UT (0, 45, 45T, 60, 60T) and surface technique (MT or PT), if required.

Column 4 - % Coverage

The extent of coverage for each exam type is expressed in percentages based on the examination volume/area required in Section XI. Depending on method, the percentage coverage may be represented in more than one way.

Surface methods are the simplest and are expressed as a percentage of the required surface area receiving no coverage and the remaining balance from 100% as the total coverage.

Ultrasonic coverage is first expressed for each exam type as a percentage of the volume receiving no coverage, angle-beam coverage in one direction only, and angle-beam coverage in two directions. These percentages are then used to compute the effective coverage for that exam type. In the case of 0 degree, the effective coverage is equal to the balance of 100% minus the percentage receiving no coverage. The effective coverage for angle beam is calculated from the following formula:

$$c = \frac{a + 2*b}{2}$$ (effective coverage formula, angle beam)

where a = one direction only percentage
b = two direction percentage

Examples:

(1)

none	1 dir	2 dir
0%	0%	100%

$$c = \frac{0 + 2*100}{2}$$ = 100% effective coverage

(2)

none	1 dir	2 dir
0%	100%	0%

$$c = \frac{100 + 2*0}{2}$$ = 50% effective coverage

(3)

none	1 dir	2 dir
50%	50%	0%

$$c = \frac{50 + 2*0}{2}$$ = 25% effective coverage

The total UT coverage is then expressed as the average of the effective coverage percentages for each UT exam type. Each UT exam type is considered as equal weight in the calculation of the average.

Column 5 - Limitation

A description of the type of limitation and primary reason for why the coverage was limited is provided in this section.

ASME SECTION XI CODE COVERAGE LIMITATIONS

1990 1RE02 ISI

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 1

ASME CATEGORY B-B

SYSTEM: PRESSURIZER (CLASS 1)

CLASS CATGY ITEM NO. EXM RQT	- LINE NO./SUBASSEMBLY - WELD IDENTIFICATION - WELD ID FIGURE - EXAMINATION METHOD	EXAM TYPE	% COVERAGE NONE	1 DIR ONLY	2 DIR	EFF. COV.	TOTAL	LIMITATION
1	PRZ-1	UT0	4	-	-	96		LIMITED UT FROM THE SHELL SIDE DUE
B-B	C1	UT45	2	9	89	94		TO PROXIMITY OF PERMANENT PIPE
B2.11	FIGURE NO. A-RPV-2	UT45T	4	0	96	96		SUPPORTS AND 3/4" INSTRUMENTATION
VOL		UT60	1	12	87	93		LINES.
	HEAD-TO-SHELL	UT60T	4	0	96	96		
	UT						95	

SYSTEM: STEAM GENERATOR 1A (CLASS 1)

CLASS CATGY ITEM NO. EXM RQT	- LINE NO./SUBASSEMBLY - WELD IDENTIFICATION - WELD ID FIGURE - EXAMINATION METHOD	EXAM TYPE	% COVERAGE NONE	1 DIR ONLY	2 DIR	EFF. COV.	TOTAL	LIMITATION
1	SG-1A	UT0	34	-	-	66		NO UT FROM THE SUPPORT RING SIDE DUE
B-B	SR1	UT45	11	58	31	60		TO SUPPORT RING CONFIGURATION.
B2.31	FIGURE NO. A-SG-1	UT45T	34	0	66	66		LIMITED UT45 AND UT60 FROM THE HEAD
VOL		UT60	16	67	17	51		SIDE DUE TO PROXIMITY OF INLET AND
	HEAD-TO-SUPPORT RING	UT60T	34	0	66	66		OUTLET NOZZLE WELDS.
	UT						62	
1	SG-1A	UT0	45	-	-	55		NO UT FROM THE SUPPORT RING SIDE DUE
B-B	SR2	UT45	9	57	34	63		TO SUPPORT RING CONFIGURATION.
B2.40	FIGURE NO. A-SG-1	UT45T	[illegible]	0	55	55		LIMITED UT45 AND UT60 FROM THE TUBE
VOL		UT60	6	74	20	57		PLATE SIDE DUE TO PROXIMITY OF
	SPT RING-TO-TUBE PLATE	UT60T	45	0	55	55		WELDED PLATES.
	UT						57	

ASME SECTION XI CODE COVERAGE LIMITATIONS

1990 1RE02 ISI

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 1

ASME CATEGORY B-D

SYSTEM: STEAM GENERATOR 1A (CLASS 1)

CLASS CATGY ITEM NO. EXM RQT	- LINE NO./SUBASSEMBLY - WELD IDENTIFICATION - WELD ID FIGURE - EXAMINATION METHOD	EXAM TYPE	% COVERAGE NONE	1 DIR ONLY	2 DIR	EFF. COV.		LIMITATION
1	SG-1A	UT0	1	-	-	99		[illegible]T FROM THE HEAD SIDE DUE
B-D	IN	UT45	0	7	93	97		[illegible]TY OF WELD SR1 AND VIBRATION
B3.130	FIGURE NO. A-SG-1	UT45T	1	0	99	99		[illegible]TRUMENTATION BOX.
VOL		UT60	0	14	86	93		
	NOZZLE-TO-HEAD	UT60T	1	0	99	99		
	UT						97	
1	SG-1A	UT0	2	-	-	98		LIMITED UT FROM THE HEAD SIDE DUE
B-D	ON	UT45	1	6	93	96		TO PROXIMITY OF WELD SR1 AND VIBRATION
B3.130	FIGURE NO. A-SG-1	UT45T	2	0	98	98		SENSOR INSTRUMENTATION BOX.
VOL		UT60	0	13	87	94		
	NOZZLE-TO-HEAD	UT60T	2	0	98	98		
	UT						97	

ASME SECTION XI CODE COVERAGE LIMITATIONS

1990 1RE02 ISI

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 1

ASME CATEGORY B-G-1

SYSTEM: RPV CLOSURE HEAD BOLTING (CLASS 1)

CLASS CATGY ITEM NO. EXM RQT	- LINE NO./SUBASSEMBLY - WELD IDENTIFICATION - WELD ID FIGURE - EXAMINATION METHOD	EXAM TYPE	% COVERAGE NONE	1 DIR ONLY	2 DIR	EFF. COV.	TOTAL	LIMITATION
1 B-G-1 B6.10 SURF	CLOSURE NUTS 1A,4A,7A,10A,13A,16A, 19A,22A,25A,28A,31A,34A FIGURE NO. A-RPV-2	UT0 UT43	9 0	- 18	- 82	91 91	 91	LIMITED UT FROM THE OD SURFACE DUE TO SPANNER WRENCH SLOTS. UT PERFORMED AS A SUPPLEMENTAL EXAMINATION OF THE THREADED AREA. MT PERFORMED ON ALL SURFACES EXCEPT THE THREADED PORTION DUE TO MT YOKE ACCESS.
	UT/MT	MT	0	-	-	-	100	
1 B-G-1 B6.30 VOL/SURF	CLOSURE STUDS 1A,4A,7A,10A,13A,16A, 19A,22A,25A,28A,31A,34A FIGURE NO. A-RPV-2	UT45/60	0	11	89	95	 95	EXAMINATION VOLUME IN ACCORDANCE WITH CODE CASE N-307-1. LIMITED UT OF THE ROTO-LOK LUGS DUE TO CONFIGURATION OF THE LUGS.
	UT/MT/PT	MT/PT	0	-	-	-	100	

ASME SECTION XI CODE COVERAGE LIMITATIONS

1990 1RE02 ISI

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 1

ASME CATEGORY B-J

SYSTEM: REACTOR COOLANT (CLASS 1 PIPING)

CLASS CATGY ITEM NO. EXM RQT	- LINE NO./SUBASSEMBLY - WELD IDENTIFICATION - WELD ID FIGURE - EXAMINATION METHOD	EXAM TYPE	% COVERAGE NONE	1 DIR ONLY	2 DIR	EFF. COV.	TOTAL	LIMITATION
1 B-J B9.11 VOL/SURF	8-RC-1114 1 FIGURE A-RC-12 VALVE-TO-PIPE	45/60 45T	0 17	2 0	98 83	99 83	91	NO UT FROM THE VALVE SIDE DUE TO VALVE CONFIGURATION.
	UT/PT	PT	0	-	-	-	100	

APPENDIX 2-E

OWNER'S REPORT FOR INSERVICE INSPECTIONS
NIS-1 FORMS

FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS
As required by the Provisions of the ASME Code Rules

1. Owner Houston Lighting & Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

2. Plant South Texas Project Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

3. Plant Unit 1 4. Owner and Certificate of Authorization (if required) N.A.

5. Commercial Service Date 08/25/88 6. National Board Number for Unit N.A.

7. Components Inspected ASME Code Class 1 (IWB) Items - Welds Program
(See Page 3 of 3 for Identification Numbers)

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.		National Board No.
Reactor Pressure Vessel	Combustion Engineering/ Westinghouse (M)	11073		22190
Steam Generator 1A	Westinghouse (M)	2131		W18691
Steam Generator 1B	Westinghouse (M)	2132		W18692
Steam Generator 1C	Westinghouse (M)	2133		W18693
Steam Generator 1D	Westinghouse (M)	[illegible]		W18694
Pressurizer	Westinghouse (M)	[illegible]2141		W18590
Class 1 Piping	Ebasco (I)	N.A.		N.A

Note: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of each form.

FORM NIS-1 (Back)

8. Examination Dates 04/13/90 to 05/05/90 9. Inspection Interval from 08/25/88 to 08/25/98

10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. (ASME Code Class 1 IWB Items - Welds Program)

See Page 3 of 3 for list of examinations performed. The examinations performed this outage and previous outage constitute approximately 20 percent of the required examinations for the current Interval.

11. Abstract of Conditions Noted.

Relevant visual indications (evidence of coolant leakage) were noted on or near the primary manway bolting of Steam Generators 1A (inlet and outlet), 1B (inlet only), and 1C (outlet only). No other significant visual, surface or volumetric indications were noted.

12. Abstract of Corrective Measures Recommended and Taken.

The original scope of visual examinations of the Steam Generator primary manway bolting (SG-1A) was expanded to include the primary manway bolting of Steam Generators 1B, 1C, and 1D. Therefore, all Steam Generator primary manway bolting was examined. Evaluation of this condition by Engineering determined the manways and bolting were acceptable and no corrective measures were taken or recommended. Because no corrective action was taken, the primary manways observed with evidence of leakage will be reexamined during the next three (3) inspection periods as required by IWB-2420.

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of ASME Code, Section XI.

Certificate of Authorization No.(if applicable) N.A. Expiration Date N.A.

Date 6-21 19 90 Signed Houston Lighting & Power Co. By R. L. Beverly
Owner

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Texas and employed by Arkwright Mutual Insurance Co. of Norwood, Mass have inspected the components described in this Owner's Report during the period 4-1-90 to 7-9-90, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the inspection plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, express or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

B. Russell Commissions Factory Mutual System Tex 826
Inspector's Signature National Board, State, Province, and Endorsements
B. R. Russell

Date 7-9- 19 90

SUPPLEMENT TO FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS FOR ASME Code Class 1 (IWB) Items - Welds Program

1. Owner Houston Lighting & Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

2. Plant South Texas Project Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

3. Plant Unit 1 4. Owner and Certificate of Authorization (if required) N.A.

5. Commercial Service Date 08/25/88 6. National Board Number for Unit N.A.

ASME CATGY	ASME ITEM	COMPONENT or SYSTEM	IDENTIFICATION NO.	EXAM METHOD	REMARKS
B-B	B2.11	PRZR	PRZ-1-C1	UT	SHELL-TO-HEAD - CIRCUMFERENTIAL WELD
B-B	B2.12	PRZR	PRZ-1-L1	UT	SHELL-TO-HEAD - LONGITUDINAL WELD
B-B	B2.31	STM GEN	SG-1A-SR1	UT	CIRCUMFERENTIAL HEAD WELD
B-B	B2.40	STM GEN	SG-1A-SR2	UT	TUBESHEET-TO-HEAD WELD
B-D	B3.130	STM GEN	SG-1A-ON	UT	NOZZLE-TO-VESSEL WELD
B-D	B3.130	STM GEN	SG-1A-IN	UT	NOZZLE-TO-VESSEL WELD
B-D	B3.140	STM GEN	SG-1A-ON-IR	UT	NOZZLE INSIDE RADIUS SECTION
B-D	B3.140	STM GEN	SG-1A-IN-IR	UT	NOZZLE INSIDE RADIUS SECTION
B-G-1	B6.10	RPV	CLOSURE NUTS	MT/UT	NOS. 1A,6A,7A,10A,13A,16A,19A,22A,25A,28A,31A,34A
B-G-1	B6.30	RPV	CLOSURE STUDS	PT/MT/UT	NOS. 1A,6A,7A,10A,13A,16A,19A,22A,25A,28A,31A,34A
B-G-1	B6.50	RPV	CLOSURE HEAD WASHERS	VT-1	NOS. 1A,6A,7A,10A,13A,16A,19A,22A,25A,28A,31A,34A
B-G-2	B7.30	STM GEN	SG-1A-IMB	VT-1	BOLTS AND NUTS - INLET MANWAY
B-G-2	B7.30	STM GEN	SG-1A-OMB	VT-1	BOLTS AND NUTS - OUTLET MANWAY
B-G-2	B7.30	STM GEN	SG-1B-IMB	VT-1	BOLTS AND NUTS - INLET MANWAY
B-G-2	B7.30	STM GEN	SG-1B-OMB	VT-1	BOLTS AND NUTS - OUTLET MANWAY
B-G-2	B7.30	STM GEN	SG-1C-IMB	VT-1	BOLTS AND NUTS - INLET MANWAY
B-G-2	B7.30	STM GEN	SG-1C-OMB	VT-1	BOLTS AND NUTS - OUTLET MANWAY
B-G-2	B7.30	STM GEN	SG-1D-IMB	VT-1	BOLTS AND NUTS - INLET MANWAY
B-G-2	B7.30	STM GEN	SG-1D-OMB	VT-1	BOLTS AND NUTS - OUTLET MANWAY
B-G-2	B7.50	CV	2(1.5)-CV-1122-2FB	VT-1	FLANGE BOLTING
B-J	B9.11	CV	4-CV-1001-1	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RC	6-RC-1114-1	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RC	12-RC-1112-2	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RC	12-RC-1112-7	UT PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RC	12-RC-1112-11	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RC	12-RC-1125-3	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RC	12-RC-1125-13	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RH	10-RH-1308-3	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RH	10-RH-1308-6	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RH	12-RH-1301-2	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RH	12-RH-1301-6	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	RH	12-RH-1301-9	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	SI	6-SI-1111-1	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	SI	6-SI-1327-5	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	SI	8-SI-1327-5	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	SI	8-SI-1327-7	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.11	SI	12-SI-1125-4	UT,PT	CIRCUMFERENTIAL WELD
B-J	B9.21	CV	2-CV-1124-4	PT	CIRCUMFERENTIAL WELD
B-J	B9.21	CV	2-CV-1124-8	PT	CIRCUMFERENTIAL WELD
B-J	B9.21	CV	2-CV-1124-12	PT	CIRCUMFERENTIAL WELD
B-J	B9.21	CV	2(1.5)-CV-1122-2	PT	CIRCUMFERENTIAL WELD

FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS
As required by the Provisions of the ASME Code Rules

1. Owner Houston Lighting & Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

2. Plant South Texas Project Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

3. Plant Unit 1 4. Owner and Certificate of Authorization (if required) N.A.

5. Commercial Service Date 08/25/88 6. National Board Number for Unit N.A.

7. Components Inspected ASME Code Class 2 (IWC) Items - Welds Program
(See Page 3 of 3 for Identification Numbers)

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.		National Board No.
Class 2 Piping	Ebasco (I)	N.A.		N.A.
High Head SI Pump SIAP1H-1A (2N12I1NPA10 A)	Pacific Pumps (M)	51695		382
Low Head SI Pump SIAPLH-1A (2N12I1NPA16A)	Pacific Pumps (M)	51701		420

Note: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of each form.

FORM NIS-1 (Back)

8. Examination Dates 03/29/90 to 04/16/90 9. Inspection Interval from 08/25/88 to 08/25/98

10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. (ASME Code Class 2 IWC Items - Welds Program)
See Page 3 of 3 for list of examinations performed. The examinations performed this outage and previous outage constitute approximately 20 percent of the required examinations for the current interval.

11. Abstract of Conditions Noted.
No relevant conditions were noted.

12. Abstract of Corrective Measures Recommended and Taken.
No corrective measures were taken or recommended.

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of ASME Code, Section XI.

Certificate of Authorization No.(if applicable) N.A. Expiration Date N.A.

Date 6-21 19 90 Signed Houston Lighting & Power Co. By R. L. Beverly
Owner

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Texas and employed by Arkwright Mutual Insurance Co. of Norwood, Mass have inspected the components described in this Owner's Report during the period 3-15-90 to 7-10-90, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the inspection plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, express or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

B. R. Russell
Inspector's Signature
B. R. Russell

Commissions Factory Mutual System Tex 826
National Board, State, Province, and Endorsements

Date 7-10- 19 90

SUPPLEMENT TO FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS FOR ASME Code Class 2 (WC) Items - Welds Program

1. Owner Houston Lighting & Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

2. Plant South Texas Project Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

3. Plant Unit 1 4. Owner and Certificate of Authorization (if required) N.A.

5. Commercial Service Date 08/25/88 6. National Board Number for Unit N.A.

ASME CATGY	ASME ITEM	COMPONENT or SYSTEM	IDENTIFICATION NO.	EXAM METHOD	REMARKS
C-C	C3.20	SI	24-SI-1101-8PL(1-7)	PT	INTEGRAL ATTACHMENTS
C-F-1	--	CS	6-CS-1103-12	UT,PT	CIRCUMFERENTIAL WELD/AUGMENTED ISI-IEB 79-17
C-F-1	--	CS	6-CS-1103-12 (LU)	UT,PT	LONGITUDINAL WELD/AUGMENTED ISI-IEB 79-17
C-F-1	--	CS	8-CS-1102-11	UT,PT	CIRCUMFERENTIAL WELD/AUGMENTED ISI-IEB 79-17
C-F-1	C5.11	CS	12-CS-1101-2	UT,PT	CIRCUMFERENTIAL WELD
C-F-1	C5.12	CS	12-CS-1101-2 (LU/LD)	UT,PT	LONGITUDINAL WELDS
C-F-1	--	SI	10-SI-1101-1	UT,PT	CIRCUMFERENTIAL WELD/AUGMENTED ISI-IEB 79-17
C-F-1	--	SI	10-SI-1101-1 (LD)	UT,PT	LONGITUDINAL WELD/AUGMENTED ISI-IEB 79-17
C-F-1	C5.11	SI	12-SI-1101-1	UT,PT	CIRCUMFERENTIAL WELD
C-F-1	C5.12	SI	12-SI-1101-1 (LD)	UT,PT	LONGITUDINAL WELD
C-F-1	C5.11	SI	16-SI-1101-1	UT,PT	CIRCUMFERENTIAL WELD
C-F-1	C5.12	SI	16-SI-1101-1 (LU,LD)	UT,PT	LONGITUDINAL WELDS
C-F-1	C5.11	SI	16-SI-1101-3	UT,PT	CIRCUMFERENTIAL WELD
C-F-1	C5.12	SI	16-SI-1101-3 (LUI/O,LD)	UT,PT	LONGITUDINAL WELDS
C-F-1	C5.11	SI	16-SI-1101-5	UT,PT	CIRCUMFERENTIAL WELD
C-F-1	C5.12	SI	16-SI-1101-5 (LD)	UT,PT	LONGITUDINAL WELD
C-F-1	C5.21	SI	2-SI-1106-15	UT,PT	CIRCUMFERENTIAL WELD
C-F-1	C5.30	SI	2-SI-1106-2	PT	SOCKET WELD
C-F-1	C5.30	SI	2-SI-1139-1	PT	SOCKET WELD
C-F-1	C5.51	MS	30-MS-1001-21	UT,MT	CIRCUMFERENTIAL WELD
C-F-1	C5.52	MS	30-MS-1001-21 (LUI/O,LD)	UT,MT	LONGITUDINAL WELDS
C-F-1	C5.51	MS	30-MS-1001-23	UT,MT	CIRCUMFERENTIAL WELD
C-F-1	C5.52	MS	30-MS-1001-23 (LU)	UT,MT	LONGITUDINAL WELD
C-F-1	C5.51	MS	30-MS-1004-4	UT,MT	CIRCUMFERENTIAL WELD
C-F-1	C5.52	MS	30-MS-1004-4 (LUI/O,LD)	UT,MT	LONGITUDINAL WELDS
C-G	C6.10	HH SI PUMP	SIAPHH-1A-PCW1	PT	PUMP CASING WELD
C-G	C6.10	HH SI PUMP	SIAPHH-1A-PCW2	PT	PUMP CASING WELD
C-G	C6.10	LH SI PUMP	SIAPLH-1A-PCW2	PT	PUMP CASING WELD

3.0 COMPONENT SUPPORT EXAMINATIONS

3.1 Introduction

ISI of Class 1, 2, and 3 component supports of STPEGS-1 was performed between March 29 and May 29, 1990. These examinations constitute the second ISI of the first inspection interval for the Component Supports Examination Program.

This Section of the Summary Report documents the examinations of component supports performed by HL&P QC NDE Personnel in accordance with the following documents:

(1) HL&P Specification 5U035JS003, "Inservice Inspection Examination of Component Supports of South Texas Project Electric Generating Unit 1 First Inspection Interval",

(2) "Examination Plan for the 1990 - 1RE02 Inservice Inspection at the South Texas Project Electric Generating Station, Unit 1" including changes made during the outage (Outage Plan).

The HL&P Specification provides a detailed description of the rules for exemption and selection of Class 1, 2, and 3 component supports for ISI. The 1990 Examination Plan is an individual Outage Plan for implementing ISI component support examinations as designated in the HL&P Specification.

3.2 Scope of Examinations

A total of seventy-nine (79) component supports were visually examined. One of these supports was examined to meet preservice inspection (PSI) baseline requirements due to a modification performed during the outage. These supports, selected from the Component Supports ISI Examination Plan (5U035JS0003), constitute approximately thirteen (13) percent of the total piping and equipment supports required to be examined during the first inspection interval. When combined with the component supports examined during the first refueling outage (1RE01), approximately twenty (20) percent of the total piping and equipment supports required to be examined during the first inspection interval have been examined.

Class 1

One (1) Class 1 equipment support (Reactor Coolant Pump column) was examined and ten (10) Class 1 piping supports were examined in the following systems:

Reactor Coolant (RC)	4
Residual Heat Removal (RH)	6

Class 2

No Class 2 equipment supports were examined and twenty-seven (27) Class 2 piping supports were examined in the following systems:

Auxiliary Feedwater (AF)	4
Containment Spray (CS)	1
Feedwater(FW)	1
Main Steam (MS)	2*
Residual Heat Removal (RH)	3
Safety Injection (SI)	16

* - Examination of one of the MS supports was a PSI baseline examination after a modification (strut replacement) was performed.

Class 3

Three (3) Class 3 equipment support (Component Cooling and Diesel Generator Fluid Systems) were examined and thirty-eight (38) Class 3 piping supports were examined in the following systems:

Auxiliary Feedwater (AF)	5
Component Cooling (CC)	28
Essential Cooling Water (EW)	4
Reactor Make-Up (RM)	1

A complete list of component supports examined during IRE02 is contained in Appendix 3-A.

3.3 Personnel and Procedures

3.3.1 Personnel Qualifications

Component supports were visually examined (VT-3 and VT-4) by HL&P QC NDE personnel certified in accordance with ASME Section XI (IWA-2300) and HL&P Operations Engineering Procedure OEP-9.04Q, "Personnel Certification Procedure for Visual Examination per ASME B&PV Code, Section XI" (Rev. 2). A listing of the personnel who performed visual examinations of component supports, including their certification level, is included in Appendix 3-B.

3.3.2 Examination Procedure

Visual (VT-3 and VT-4) examinations of component supports was performed in accordance with OEP-9.07Q, "Inservice Inspection - Visual Examination of Component Supports" (Rev.0).

3.4 Summary of Examinations

3.4.1 Piping Supports

Seventy-five (75) piping supports were examined just prior to and during 1RE02, distributed among ten (10) piping systems as shown in Appendix 3-A. These examinations were conducted on rigid restraints (51), guides (16), and spring hangers (8).

3.4.2 Equipment Supports

Four (4) equipment supports were examined just prior to and during 1RE02, distributed among three (3) systems as shown in Appendix 3-A.

3.4.3 Additional and Successive Examinations

The results of the visual examinations of component supports performed during 1RE02 did not require that any additional examinations (IWF-2430) be performed or any successive examinations (IWF-2420) be scheduled.

3.5 Examination Results and Corrective Actions

Three (3) Class 3 pipe supports were found to have reportable indications. EW-1102-HL5001 had tape coat damage, EW-1121-HL5001 had a loose lock nut, and CC-1116-RR01 had a damaged cotter pin and a missing cotter pin. These was reported on RFA Nos. 900092, 900093, and 901169, respectively. All three supports were or will be reworked to meet specification requirements.

3.6 Certification of Inspections

Section XI NIS-1 forms, "Owner's Report for Inservice Inspections", have been prepared to certify the STPEGS-1 component support ISI examinations described in this section of the Summary Report. The STPEGS-1 component support ISI examinations have been certified by our ANII, Factory Mutual Systems, on the NIS-1 forms included in Appendix 3-C.

APPENDIX 3-A

SUMMARY OF EXAMINATIONS

APPENDIX 3-A
ISI EXAMINATIONS OF COMPONENT SUPPORTS

1RE02 - SPRING 1990 — 04-Jun-90

SYSTEM	SUPPORT MARK NO.	NPS	CL	TYPE*	EXAM METH	BLDG	CONSTRUCTION ISO DRAWING	EXAM COMPL'D	REMARKS
CLASS 1 - PIPING									
REACTOR COOLANT SYSTEM									
	RC1123 - HL5011	4	1	RR	VT-3	RCB	4C369PRC457-07	05/07/90	
	RC1123 - HL5012	4	1	RR	VT-3	RCB	4C369PRC457-07	05/07/90	
	RC1125 - HL5009	12	1	SH	VT-3/VT-4	RCB	4C369PRC457-10	05/09/90	
	RC1125 - HL5010	12	1	GU	VT-3	RCB	4C369PRC457-10	05/02/90	
RESIDUAL HEAT REMOVAL SYSTEM									
	RH1201 - HL5002	12	1	RR	VT-3	RCB	4C369PRH459-07	05/03/90	
	RH1201 - HL5009	12	1	SH	VT-3/VT-4	RCB	4C369PRH459-07	05/09/90	
	RH1201 - HL5010	12	1	SH	VT-3/VT-4	RCB	4C369PRH459-07	05/08/90	
	RH1201 - RR04	12	1	RR	VT-3	RCB	4C369PRH459-07	05/04/90	
	RH1201 - RR05	12	1	GU	VT-3	RCB	4C369PRH459-07	05/07/90	
	RH1201 - RR06	12	1	RR	VT-3	RCB	4C369PRH459-07	05/04/90	
CLASS 1 - EQUIPMENT									
REACTOR COOLANT SYSTEM									
	RPC1B		1	EQ	VT-3	RCB	N/A	05/04/90	REACTOR COOLANT PUMP 101B - COL 1
CLASS 2 - PIPING									
AUXILIARY FEEDWATER SYSTEM									
	AF1012 - HL5008	8	2	RR	VT-3	RCB	2C369PAF402-01	05/04/90	
	AF1012 - HL5009	8	2	RR	VT-3	RCB	2C369PAF402-01	05/04/90	
	AF1012 - HL5010	8	2	RR	VT-3	RCB	2C369PAF402-01	05/02/90	
	AF1012 - HL5018	8	2	SH	VT-3/VT-4	RCB	2C369PAF402-01	05/04/90	
CONTAINMENT SPRAY SYSTEM									
	CS1203 - HL5005	6	2	RR	VT-3	FHB	5F369PCS515-04	04/03/90	
FEEDWATER SYSTEM									
	FW1031 - HL5001	18	2	SH	VT-3/VT-4	IVC	2G369PFW633-04	05/29/90	
MAIN STEAM SYSTEM									
	MS1002 - HL5002	30	2	RR	VT-3	RCB	2C369PMS446-02	05/22/90	PSI BASELINE (Ref. ECN 89-S-0017A)
	MS1003 - HL5018	30	2	SH	VT-3/VT-4	IVC	2G369PMS646-08	05/09/90	
RESIDUAL HEAT REMOVAL SYSTEM									
	RH1103 - HL5001	8	2	RR	VT-3	RCB	4C369PRH459-03	05/01/90	
	RH1103 - RR04	8	2	RR	VT-3	RCB	4C369PRH459-03	05/01/90	
	RH1103 - RR06	8	2	GU	VT-3	RCB	4C369PRH459-03	05/01/90	
SAFETY INJECTION SYSTEM									
	SI1106 - GU0070	6	2	GU	VT-3	RCB	2C369PSI472-06	04/30/90	
	SI1106 - HL5001	6	2	RR	VT-3	RCB	2C369PSI472-06	05/01/90	
	SI1106 - HL5012	6	2	GU	VT-3	RCB	2C369PSI472-06	05/01/90	
	SI1106 - HL5013	6	2	GU	VT-3	FHB	2F361PSI572-05	04/03/90	
	SI1106 - RH05	6	2	RR	VT-3	FHB	2F361PSI572-05	04/03/90	
	SI1106 - RH06	6	2	GU	VT-3	FHB	2F361PSI572-05	04/03/90	
	SI1106 - RH08	6	2	RR	VT-3	FHB	2F361PSI572-05	04/03/90	
	SI1106 - RR09	6	2	RR	VT-3	FHB	2F361PSI572-05	04/04/90	
	SI1106 - RR12	6	2	RR	VT-3	FHB	2F361PSI572-05	04/03/90	
	SI1106 - RR54	6	2	RR	VT-3	RCB	2C369PSI472-06	05/01/90	
	SI1106 - RR55	6	2	RR	VT-3	RCB	2C369PSI472-06	05/01/90	
	SI1106 - RR56	6	2	RR	VT-3	RCB	2C369PSI472-06	05/01/90	
	SI1106 - RR57	6	2	RR	VT-3	RCB	2C369PSI472-06	05/01/90	
	SI1106 - RR58	6	2	RR	VT-3	RCB	2C369PSI472-06	05/01/90	
	SI1106 - RR59	6	2	RR	VT-3	RCB	2C369PSI472-06	05/01/90	
	SI1106 - SH10	6	2	SH	VT-3/VT-4	FHB	2F361PSI572-05	04/03/90	

* - SUPPORT TYPE

EQ - Equipment
GU - Guide
RR - Rigid Restraint
SH - Spring Hanger

APPENDIX 3-A
ISI EXAMINATIONS OF COMPONENT SUPPORTS

1RE02 - SPRING 1990 — 04-Jun-90

SYSTEM	SUPPORT MARK NO.	NPS	CL	TYPE*	EXAM METH	BLDG	CONSTRUCTION ISO DRAWING	EXAM COMPL'D	REMARKS
CLASS 3 - PIPING									
AUXILIARY FEEDWATER SYSTEM									
	AF1047 - HL5001	4	3	GU	VT-3	IVC	3G389PAF802-18	04/03/90	
	AF1047 - HL5002	4	3	RR	VT-3	IVC	3G389PAF802-18	04/03/90	
	AF1047 - HL5003	4	3	GU	VT-3	IVC	3G389PAF802-18	04/03/90	
	AF1047 - HL5004	4	3	GU	VT-3	IVC	3G389PAF802-18	04/03/90	
	AF1047 - HL5006	4	3	GU	VT-3	IVC	3G389PAF802-18	04/03/90	
COMPONENT COOLING SYSTEM									
	CC1116 - RR01	10	3	RR	VT-3	RCB	3C389PCC407-12	05/10/90	REPLACE COTTER PINS PER RFA 90-1169. WORK DONE TO WR# CC 83 '96.
	CC1116 - RR02	10	3	RR	VT-3	RCB	3C389PCC407-12	05/09/90	
	CC1116 - RR05	10	3	RR	VT-3	RCB	3C389PCC407-12	05/01/90	
	CC1116 - RR06	10	3	RR	VT-3	RCB	3C389PCC407-12	05/01/90	
	CC1116 - RR07	10	3	RR	VT-3	RCB	3C389PCC407-12	05/01/90	
	CC1116 - RR09	10	3	RR	VT-3	RCB	3C389PCC407-12	05/01/90	
	CC1116 - RR10	10	3	RR	VT-3	RCB	3C389PCC407-12	05/01/90	
	CC1116 - RR11	10	3	RR	VT-3	RCB	3C389PCC407-12	05/01/90	
	CC1116 - RR18	10	3	GU	VT-3	RCB	3C389PCC407-12	05/24/90	
	CC1116 - RR19	10	3	RR	VT-3	RCB	3C389PCC407-12	05/09/90	
	CC1116 - RR20	10	3	RR	VT-3	RCB	3C389PCC407-12	05/09/90	
	CC1117 - HL5003	10	3	RR	VT-3	RCB	4C389PCC407-13	05/01/90	
	CC1117 - HL5005	10	3	RR	VT-3	RCB	4C389PCC407-13	05/11/90	
	CC1117 - HL5006	10	3	SH	VT-3/VT-4	RCB	4C389PCC407-13	05/09/90	
	CC1117 - RR01	10	3	GU	VT-3	RCB	4C389PCC407-13	05/09/90	
	CC1117 - RR05	10	3	RR	VT-3	RCB	4C389PCC407-13	04/30/90	
	CC1117 - RR06	10	3	RR	VT-3	RCB	4C389PCC407-13	05/01/90	
	CC1117 - RR07	10	3	RR	VT-3	RCB	4C389PCC407-13	05/01/90	
	CC1117 - RR08	10	3	RR	VT-3	RCB	4C389PCC407-13	05/01/90	
	CC1117 - RR09	10	3	RR	VT-3	RCB	4C389PCC407-13	05/01/90	
	CC1117 - RR10	10	3	RR	VT-3	RCB	4C389PCC407-13	05/01/90	
	CC1117 - RR11	10	3	RR	VT-3	RCB	4C389PCC407-13	05/01/90	
	CC1117 - RR13	10	3	RR	VT-3	RCB	4C389PCC407-13	05/10/90	
	CC1117 - RR14	10	3	RR	VT-3	RCB	4C389PCC407-13	05/09/90	
	CC1117 - RR15	10	3	RR	VT-3	RCB	4C389PCC407-13	05/09/90	
	CC1117 - RR16	10	3	RR	VT-3	RCB	4C389PCC407-13	05/09/90	
	CC1117 - RR17	10	3	RR	VT-3	RCB	4C389PCC407-13	05/09/90	
	CC1117 - RR18	10	3	RR	VT-3	RCB	4C389PCC407-13	05/09/90	
ESSENTIAL COOLING WATER SYSTEM									
	EW1102 - HL5001	30	3	RR	VT-3	MAB	3M389PEW229-19	04/03/90	REWORK TAPE COAT PER RFA 90-0092. WORK TO BE DONE BY WR# EW 87437.
	EW1102 - HL5002	30	3	RR	VT-3	MAB	3M389PEW229-19	04/04/90	
	EW1106 - HL5001	10	3	GU	VT-3	DGB	5D389PEW329-04	04/03/90	
	EW1121 - HL5001	6	3	GU	VT-3	ECW INTK	3Y381PEW729-07	04/04/90	TIGHTEN LOCK NUT PER RFA 90-0093. WORK TO BE DONE BY WR# EW 87431.
REACTOR MAKE-UP WATER SYSTEM									
	RM1002 - HL5001	6	3	GU	VT-3	MAB	3M389PRM263-03	04/04/90	
CLASS 3 - EQUIPMENT									
COMPONENT COOLING SYSTEM									
	CCX1A		3	EQ	VT-3	MAB	N/A	04/03/90	COMP COOLING WATER HX 101A - SPT 1
DIESEL GENERATOR FLUID SYSTEMS									
	JCP1A		3	EQ	VT-3	DGB	N/A	04/03/90	JACKET WATER CIRC. PUMP 134
	JHX1A		3	EQ	VT-3	DGB	N/A	04/03/90	JACKET WATER HX 134

* - SUPPORT TYPE

EQ - Equipment
GU - Guide
RR - Rigid Restraint
SH - Spring Hanger

APPENDIX 3-B

PERSONNEL

APPENDIX 3-B

PERSONNEL

Name	Company	Level
J. T. Graham	HL&P	II
J. F. Halley	HL&P	II
C. A. Murry	HL&P	II
P. Silva	HL&P	II
C. D. Suhler	HL&P	II
G. L. Zink	HL&P	II
A. R. Pennanen	NES	II

Company
HL&P - Houston Lighting & Power Company
NES - Nuclear Energy Services

APPENDIX 3-C

OWNER'S REPORT FOR INSERVICE INSPECTIONS
NIS-1 FORMS

FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS
As required by the Provisions of the ASME Code Rules

1. Owner Houston Lighting & Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

2. Plant South Texas Project Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

3. Plant Unit 1 4. Owner and Certificate of Authorization (if required) N.A.

5. Commercial Service Date 08/25/8[illegible] 6. National Board Number for Unit N.A.

7. Components Inspected **ASME Code Class 1 Component Supports - Piping and Equipment**

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.		National Board No.
RC1123 - HL5011	Ebasco (I)	N.A.		N.A.
RC1123 - HL5012	Ebasco (I)	N.A.		N.A.
RC1125 - HL5005	Ebasco (I)	N.A.		N.A.
RC1125 - HL5010	Ebasco (I)	N.A.		N.A.
RH1201 - HL5002	Ebasco (I)	N.A.		N.A.
RH1201 - HL5009	Ebasco (I)	N.A.		N.A.
RH1201 - HL5010	Ebasco (I)	N.A.		N.A.
RH1201 - RR04	Ebasco (I)	N.A.		N.A.
RH1201 - RR05	Ebasco (I)	N.A.		N.A.
RH1201 - RR06	Ebasco (I)	N.A.		N.A.
RC Pump 101B RPC1B (1R131NPP101B)	Westinghouse (M)	N.A.		29

Note: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of each form.

FORM NIS-1 (Back)

8. Examination Dates 04/24/90 to 05/09/90 9. Inspection Interval from 08/25/88 to 08/25/98

10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. (ASME Code Class 1 Component Supports - Piping and Equipment)
See Section 3.4 and Appendix 3-A of 1RE02 Summary Report for list of examinations performed. The examinations performed this outage and previous outage constitute approximately 20 percent of the required examinations for the current interval.

11. Abstract of Conditions Noted.
No relevant conditions were noted.

12. Abstract of Corrective Measures Recommended and Taken.
No corrective measures were taken or recommended.

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of ASME Code, Section XI.

Certificate of Authorization No.(if applicable) N.A. Expiration Date N.A.

Date 6-21 19 90 Signed Houston Lighting & Power Co. By R. L. Beverly
Owner

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Texas and employed by Arkwright Mutual Insurance Co. of Norwood, Mass have inspected the components described in this Owner's Report during the period 4-1-90 to 7-10-90, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the inspection plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, express or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

B. R. Russell Commissions Factory Mutual System Tex 826
Inspector's Signature National Board, State, Province, and Endorsements
B. R. Russell

Date 7-10- 19 90

FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS
As required by the Provisions of the ASME Code Rules

1. Owner Houston Lighting & Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

2. Plant South Texas Project Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

3. Plant Unit 1 4. Owner and Certificate of Authorization (if required) N.A.

5. Commercial Service Date 08/25/88 6. National Board Number for Unit N.A.

7. Components Inspected ASME Code Class 2 Component Supports - Piping

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.		National Board No.
AF1012 - HL5008	Ebasco (I)	N.A.		N.A.
AF1012 - HL5009	Ebasco (I)	N.A.		N.A.
AF1012 - HL5010	Ebasco (I)	N.A.		N.A.
AF1012 - HL5016	Ebasco (I)	N.A.		N.A.
CS1203 - HL5005	Ebasco (I)	N.A.		N.A.
FW1031 - HL5001	Ebasco (I)	N.A.		N.A.
MS1002 - HL5002	Ebasco (I)	N.A.		N.A.
MS1003 - HL5018	Ebasco (I)	N.A.		N.A.
RH1103 - HL5001	Ebasco (I)	N.A.		N.A.
RH1103 - RR04	Ebasco (I)	N.A.		N.A.
RH1103 - RR06	Ebasco (I)	N.A.		N.A.
SI1106 - GU0070	Ebasco (I)	N.A.		N.A.
SI1106 - HL5001	Ebasco (I)	N.A.		N.A.
SI1106 - HL5012	Ebasco (I)	N.A.		N.A.
SI1106 - HL5013	Ebasco (I)	N.A.		N.A.
SI1106 - RH05	Ebasco (I)	N.A.		N.A.
SI1106 - RH06	Ebasco (I)	N.A.		N.A.
SI1106 - RH08	Ebasco (I)	N.A.		N.A.

Note: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of each form.

FORM NIS-1 (Back)

8. Examination Dates 03/29/90 to 05/29/90 9. Inspection Interval from 08/25/88 to 08/25/98

10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. (ASME Code Class 2 Component Supports - Piping)
See Section 3.4 and Appendix 3-A of 1RE02 Summary Report for list of examinations performed. The examinations performed this outage and previous outage constitute approximately 20 percent of the required examinations for the current interval.

11. Abstract of Conditions Noted.
No relevant conditions were noted.

12. Abstract of Corrective Measures Recommended and Taken.
No corrective measures were taken or recommended.

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of ASME Code, Section XI.

Certificate of Authorization No.(if applicable) N.A. Expiration Date N.A.

Date 6-21 19 90 Signed Houston Lighting & Power Co. By R. L. Beverly
Owner

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Texas and employed by Arkwright Mutual Insurance Co. of Norwood, Mass have inspected the components described in this Owner's Report during the period 3-15-90 to 7-12-90, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the inspection plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, express or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

B. R. Russell Commissions Factory Mutual System Tex 826
Inspector's Signature National Board, State, Province, and Endorsements
B. R. Russell

Date 7-12- 19 90

SUPPLEMENT TO FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS FOR ASME Code Class 2 Component Supports

1. Owner Houston Lighting & Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

2. Plant South Texas Project Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

3. Plant Unit 1 4. Owner and Certificate of Authorization (if required) N.A.

5. Commercial Service Date 08/25/88 6. National Board Number for Unit N.A.

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.		National Board No.
SI1106 - RR09	Ebasco (I)	N.A.		N.A.
SI1106 - RR12	Ebasco (I)	N.A.		N.A.
SI1106 - RR54	Ebasco (I)	N.A.		N.A.
SI1106 - RR55	Ebasco (I)	N.A.		N.A.
SI1106 - RR56	Ebasco (I)	N.A.		N.A.
SI1106 - RR57	Ebasco (I)	N.A.		N.A.
SI1106 - RR58	Ebasco (I)	N.A.		N.A.
SI1106 - RR59	Ebasco (I)	N.A.		N.A.
SI1106 - SH10	Ebasco (I)	N.A.		N.A.

FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS
As required by the Provisions of the ASME Code Rules

1. Owner Houston Lighting & Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

2. Plant South Texas Project Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

3. Plant Unit 1 4. Owner and Certificate of Authorization (if required) N.A.

5. Commercial Service Date 08/25/88 6. National Board Number for Unit N.A.

7. Components Inspected **ASME Code Class 3 Component Supports - Piping and Equipment**

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.		National Board No.
AF1047 - HL5001	Ebasco (I)	N.A.		N.A.
AF1047 - HL5002	Ebasco (I)	N.A.		N.A.
AF1047 - HL5003	Ebasco (I)	N.A.		N.A.
AF1047 - HL5004	Ebasco (I)	N.A.		N.A.
AF1047 - HL5005	Ebasco (I)	N.A.		N.A.
CC1116 - RR01	Ebasco (I)	N.A.		N.A.
CC1116 - RR02	Ebasco (I)	N.A.		N.A.
CC1116 - RR05	Ebasco (I)	N.A.		N.A.
CC1116 - RR06	Ebasco (I)	N.A.		N.A.
CC1116 - RR07	Ebasco (I)	N.A.		N.A.
CC1116 - RR09	Ebasco (I)	N.A.		N.A.
CC1116 - RR10	Ebasco (I)	N.A.		N.A.
CC1116 - RR11	Ebasco (I)	N.A.		N.A.
CC1115 - RR18	Ebasco (I)	N.A.		N.A.
CC1116 - RR19	Ebasco (I)	N.A.		N.A.
CC1116 - RR20	Ebasco (I)	N.A.		N.A.
CC1117 - HL5003	Ebasco (I)	N.A.		N.A.
CC1117 - HL5005	Ebasco (I)	N.A.		N.A.

Note: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of each form.

FORM NIS-1 (Back)

8. Examination Dates 03/29/90 to 05/24/90 9. Inspection Interval from 08/25/88 to 08/25/98

10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. (ASME Code Class 3 Component Supports - Piping and Equipment)
See Section 3.4 and Appendix 3-A of 1RE02 Summary Report for list of examinations performed. The examinations performed this outage and previous outage constitute approximately 20 percent of the required examinations for the current Interval.

11. Abstract of Conditions Noted.
Nonconforming conditions were noted on three (3) piping supports: A) CC1116-RR01 - 1 missing and 1 damaged cotter pin; B) EW1102-HL5001 - tape coat damage; C) EW1121-HL5001 - loose lock nut

12. Abstract of Corrective Measures Recommended and Taken.
A) CC1116-RR01 - cotter pins were replaced in accordance with work request WR# CC 83596.
B) EW1102-HL5001 - a work request (WR# EW 87431) was written to repair the tape coat damage.
C) EW1121-HL5001 - a work request (WR# EW 87437) was written to tighten the lock nut.
Evaluation of the nonconforming conditions noted on supports B) and C) above determined that functionality and operability of the supports was not jeopardized.

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of ASME Code, Section XI.

Certificate of Authorization No.(if applicable) N.A. Expiration Date N.A.

Date 6-21 19 90 Signed Houston Lighting & Power Co. By R. L. Beverly
Owner

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Texas and employed by Arkwright Mutual Insurance Co. of Norwood, Mass have inspected the components described in this Owner's Report during the period 3-15-90 to 5-24-90, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the inspection plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, express or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Commissions Factory Mutual System, Tex 826
Inspector's Signature — National Board, State, Province, and Endorsements
B. R. Russell

Date 7-9-90 & 9-19-90 19 90

SUPPLEMENT TO FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS FOR ASME Code Class 3 Component Supports

1. Owner Houston Lighting & Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

2. Plant South Texas Project Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

3. Plant Unit 1 4. Owner and Certificate of Authorization (if required) N.A.

5. Commercial Service Date 08/25/88 6. National Board Number for Unit N.A.

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.		National Board No.
CC1117 - HL5006	Ebasco (I)	N.A.		N.A.
CC1117 - RR03	Ebasco (I)	N.A.		N.A.
CC1117 - RR05	Ebasco (I)	N.A.		N.A.
CC1117 - RR06	Ebasco (I)	N.A.		N.A.
CC1117 - RR07	Ebasco (I)	N.A.		N.A.
CC1117 - RR08	Ebasco (I)	N.A.		N.A.
CC1117 - RR09	Ebasco (I)	N.A.		N.A.
CC1117 - RR10	Ebasco (I)	N.A.		N.A.
CC1117 - RR11	Ebasco (I)	N.A.		N.A.
CC1117 - RR13	Ebasco (I)	N.A.		N.A.
CC1117 - RR14	Ebasco (I)	N.A.		N.A.
CC1117 - RR15	Ebasco (I)	N.A.		N.A.
CC1117 - RR16	Ebasco (I)	N.A.		N.A.
CC1117 - RR17	Ebasco (I)	N.A.		N.A.
CC1117 - RR18	Ebasco (I)	N.A.		N.A.
EW1102 - HL5001	Ebasco (I)	N.A.		N.A.
EW1102 - HL5003	Ebasco (I)	N.A.		N.A.
EW1106 - HL5001	Ebasco (I)	N.A.		N.A.
EW1121 - HL5001	Ebasco (I)	N.A.		N.A.

FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS
FOR
ASME Code Class 3 Component Supports

& Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

ct Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

4. Owner and Certificate of Authorization (if required) N.A.

08/25/88 6. National Board Number for Unit N.A.

Manufacturer or Installer	Manufacturer or Installer Serial No.		National Board No.
Ebasco (I)	N.A.		N.A.
Struthers Wells Corp. (M)	1-76-06-32940-1		14436
Crane Deming (M)	8E1701		N.A.
American Standard (M)	9H0301		32817

SUPPLEMENT TO FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS
FOR
ASME Code Class 3 Component Supports

1. Owner Houston Lighting & Power Company; Electric Tower; P.O. Box 1700; Houston, Texas 77001
(Name and Address of Owner)

2. Plant South Texas Project Electric Generating Station; P.O. Box 289; Wadsworth, Texas 77483
(Name and Address of Plant)

3. Plant Unit 1 4. Owner and Certificate of Authorization (if required) N.A.

5. Commercial Service Date 08/25/88 6. National Board Number for Unit N.A.

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.		National Board No.
RM1002 - HL5001	Ebasco (I)	N.A.		N.A.
CCW Heat Exch 1A CCX1A (3R201NHX101A)	Struthers Wells Corp. (M)	1-76-06-32940-1		14436
Jkt Wtr Circ Pmp 134 JCP1A (3Q151MPX0134)	Crane Deming (M)	8E1701		N.A.
Jkt Wtr Ht Exch 134 JHX1A (3Q151MHX0134)	American Standard (M)	9H0301		33817

SUPPLEMENT TO FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS FOR

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Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.		National Board No.
RM1002 - HL5001	Ebasco (I)	N.A.		N.A.
CCW Heat Exch 1A CCX1A (3R201NHX101A)	Struthers Wells Corp. (M)	1-76-06-32940-1		14436
Jkt Wtr Circ Pmp 134 JCP1A (3Q151MPX0134)	Crane Deming (M)	8E1701		N.A.
Jkt Wtr Ht Exch 134 JHX1A (3Q151MHX0134)	American Standard (M)	9H0301		33817