



**2RE02 INSERVICE INSPECTION SUMMARY REPORT  
FOR WELDS, STEAM GENERATOR TUBING, AND  
COMPONENT SUPPORTS**

of the

**SOUTH TEXAS PROJECT  
ELECTRIC GENERATING STATION - UNIT 2  
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  
Houston, Texas 77001

Commercial  
Operation: JUNE 19, 1989

Issue Date: MARCH 1992

# 2RE02 INSERVICE INSPECTION SUMMARY REPORT

## FOR WELDS, STEAM GENERATOR TUBING, AND

## COMPONENT SUPPORTS

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## SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

## UNIT NO. 2

USNRC DOCKET NO.: 50-499

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COMMERCIAL OPERATION DATE: JUNE 19, 1989

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## TABLE OF CONTENTS

|              |  |             |
|--------------|--|-------------|
| 1.0          | <u>2RE02 SUMMARY REPORT</u>                              | <u>Page</u> |
| 1.1          | Introduction   | 1-1         |
| 1.2          | Scope of Summary Report                                  | 1-1         |
| 2.0          | <u>WELD EXAMINATIONS</u>                                 |             |
| 2.1          | Introduction   | 2-1         |
| 2.2          | Scope of Examinations                                    | 2-1         |
| 2.3          | Personnel, Procedures, and Equipment                     | 2-3         |
|              | 2.3.1 Personnel Qualifications                           | 2-3         |
|              | 2.3.2 Examination Procedures                             | 2-3         |
|              | 2.3.3 Equipment  | 2-4         |
|              | 2.3.4 Materials  | 2-4         |
|              | 2.3.5 Calibration Blocks                                 | 2-4         |
| 2.4          | Summary of Examinations                                  | 2-4         |
|              | 2.4.1 Examination Methods                                | 2-4         |
|              | 2.4.2 Augmented Examinations                             | 2-5         |
|              | 2.4.3 Data Comparison                                    | 2-5         |
|              | 2.4.4 Additional and Successive Examinations             | 2-6         |
| 2.5          | Examination Results and Corrective Actions               | 2-6         |
| 2.6          | Certification of Inspections                             | 2-6         |
| Appendix 2-A | Summary of Examinations                                  | 2-7         |
| Appendix 2-B | Personnel/Equipment/Materials                            | 2-35        |
| Appendix 2-C | Procedures   | 2-42        |
| Appendix 2-D | ISI Examination Limitations                              | 2-46        |
| Appendix 2-E | Owner's Report for Inservice<br>Inspections - NIS-1 Form | 2-56        |

## TABLE OF CONTENTS (cont'd)

|              |   |      |
|--------------|---|------|
| 3.0          | <u>STEAM GENERATOR TUBING EXAMINATIONS</u>            |      |
| 3.1          | Introduction  | 3-1  |
| 3.2          | Scope of Examinations                                 | 3-1  |
| 3.3          | Personnel, Procedures, and Equipment                  | 3-2  |
| 3.3.1        | Personnel Qualifications                              | 3-2  |
| 3.3.2        | Examination and Analysis Procedures                   | 3-2  |
| 3.3.3        | Equipment   | 3-3  |
| 3.3.4        | Calibration Standards                                 | 3-4  |
| 3.4          | Summary of Examinations                               | 3-4  |
| 3.5          | Examination Results and Corrective Actions            | 3-5  |
| 3.6          | Certification of Inspections                          | 3-8  |
| Appendix 3-A | Changes to the ISI Outage Plan                        | 3-9  |
| Appendix 3-B | List of Examination and Data Analysis Personnel       | 3-11 |
| Appendix 3-C | Flaws with Tube Wall Thickness Reduction              | 3-13 |
| Appendix 3-D | Dings and Dents                                       | 3-15 |
| Appendix 3-E | Owner's Report for Inservice Inspections - NIS-1 Form | 3-17 |



## TABLE OF CONTENTS (cont'd)

|              |   |      |
|--------------|---|------|
| 4.0          | <u>COMPONENT SUPPORT EXAMINATIONS</u>                     |      |
| 4.1          | Introduction  | 4-1  |
| 4.2          | Scope of Examinations                                     | 4-1  |
| 4.3          | Personnel and Procedures                                  | 4-2  |
|              | 4.3.1 Personnel Qualifications                            | 4-2  |
|              | 4.3.2 Examination Procedure                               | 4-3  |
| 4.4          | Summary of Examinations                                   | 4-3  |
|              | 4.4.1 Piping and Equipment Supports                       | 4-3  |
|              | 4.4.2 Additional and Successive Examinations              | 4-3  |
| 4.5          | Examination Results and Corrective Actions                | 4-3  |
| 4.6          | Certification of Inspections                              | 4-3  |
| Appendix 4-A | Summary of Examinations                                   | 4-4  |
| Appendix 4-B | Personnel   | 4-20 |
| Appendix 4-C | Owner's Report for Inservice<br>Inspections - NIS-1 Forms | 4-22 |

## 1.0 2RE02 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 2 (STPEGS-2) performed from August 16 to completion of the second refueling outage (2RE02) on December 18, 1991. The ISI summarized herein constitutes the second ISI performed during the first inspection period of the first inspection interval of STPEGS-2. The STPEGS ISI program for welds and component supports 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 STPEGS ISI Program for steam generator tubing is scheduled in accordance with STPEGS Technical Specification 3/4.4.5. The first ten year inspection interval of STPEGS-2 extends to June 19, 1999. The first inspection period, which is of three years duration beginning with commercial operation (June 19, 1989), extends to June 19, 1992. Figure 1 of this Section depicts the first ten year interval and periods 1 through 3 for STPEGS-2. The ISI examinations performed up through 2RE02 satisfy the Section XI Code completion requirements for STPEGS-2 welds and component supports for the first inspection period.

The STPEGS-2 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-2 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 and Code bases 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, steam generator tubing, and component supports and those of Technical Specification 4.4.5.5 (b) with regard to steam generator tubing inspection.

### 1.2 Scope of Summary Report

This Summary Report describes the ISI examinations performed up through 2RE02 on welds (Section 2), steam generator tubing (Section 3), and component supports (Section 4). 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 examinations performed on Class 1 and 2 welds and other examination areas (e.g., bolting) 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. ISI examinations performed on steam generator

tubing are described in Section 3. These examinations were performed in accordance with Subsection IWB (Examination Category B-Q), STPEGS Technical Specifications 4.4.5, and other bases as specified in the Ten Year ISI Plan. The ISI examinations performed on Class 1, 2, and 3 component supports and Class 3 integral attachments are described in Section 4. 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.

# STPEGS - 2 FIRST 10-YEAR INSPECTION INTERVAL CALENDAR

| Year     | 19 89 |    |     |      | 19 90    |    |     |      | 19 91 |    |     |      | 19 92 |    |     |      | 19 93    |    |     |      | 19 94 |    |     |      | 19 95 |    |     |      | 19 96    |    |     |      | 19 97 |    |     |      | 19 98 |    |     |      | 19 99 |    |     |      |
|----------|-------|----|-----|------|----------|----|-----|------|-------|----|-----|------|-------|----|-----|------|----------|----|-----|------|-------|----|-----|------|-------|----|-----|------|----------|----|-----|------|-------|----|-----|------|-------|----|-----|------|-------|----|-----|------|
|          | Win   | Sp | Sum | Fall | Win      | Sp | Sum | Fall | Win   | Sp | Sum | Fall | Win   | Sp | Sum | Fall | Win      | Sp | Sum | Fall | Win   | Sp | Sum | Fall | Win   | Sp | Sum | Fall | Win      | Sp | Sum | Fall | Win   | Sp | Sum | Fall | Win   | Sp | Sum | Fall | Win   | Sp | Sum | Fall |
| Period   | CO    |    |     |      | PERIOD 1 |    |     |      |       |    |     |      |       |    |     |      | PERIOD 2 |    |     |      |       |    |     |      |       |    |     |      | PERIOD 3 |    |     |      |       |    |     |      |       |    |     |      | EOI   |    |     |      |
| Outage # | 6/19  |    |     |      | 1        |    |     |      |       |    |     |      |       |    |     |      | 3        |    |     |      |       |    |     |      |       |    |     |      | 5        |    |     |      |       |    |     |      |       |    |     |      | 6/19  |    |     |      |

CO - Commercial Operation  
EOI - End of Interval

FIGURE 1

## 2.0 WELD EXAMINATIONS

### 2.1 Introduction

ISI of STPEGS-2 Class 1 and 2 welds and components within the Welds Examination Program was performed between August 27 and November 21, 1991. These examinations constitute the second ISI and completion of the first inspection period of the first inspection interval for the Welds Examination Program for STPEGS-2.

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 2" (LTP),
- (2) "Examination Plan for the 1991 - 2RE02 Inservice Inspection at the South Texas Project Electric Generating Station, Unit 2" 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 1991 Examination Plan is an individual Outage Plan for implementing ISI weld examinations as scheduled in the LTP. The Outage Plan references the applicable operating procedures (OP) and NDE procedures used for the examinations.

### 2.2 Scope of Examinations

NDE was performed on a total of eighty-six (86) selected Class 1 and Class 2 components and examination areas as contained in the Outage Plan. Any deviations or changes were documented as Examination Plan Changes to 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, sixteen (16) baseline examinations were performed on several components as a result of replacement, modification, or increase in scope of the augmented ISI program for NRC Bulletin 88-08. These additional examinations are noted in the remarks column of the Examination Summary Tables as "Baseline Examination".

### Class 1

A total of fifty (50) selected and sixteen (16) baseline examinations were performed on the following Class 1 components and examination areas:

#### Vessels

Reactor Pressure Vessel  
Pressurizer  
Steam Generator 2A & 2D (Primary Side)

#### Piping

Reactor Coolant System  
Safety Injection

#### Valves

Safety Injection

### Class 2

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

#### Vessels

Steam Generator 2A (Secondary Side)

#### Piping

Feedwater System  
Main Steam System  
Safety Injection System

#### Pumps

Containment Spray Pump 2A  
Residual Heat Removal Pump 2A  
High Head Safety Injection Pump 2A  
Low Head Safety Injection Pump 2A

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.

When combined with the examinations performed during the first refueling outage, these examinations constitute the following percentages of completion for Class 1 and Class 2 components during the first inspection interval:

|              |     |
|--------------|-----|
| Class 1(IWB) | 29% |
| Class 2(IWC) | 30% |

## 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 have been qualified by Electric Power Research Institute in detection of intergranular stress corrosion cracking. A list of all personnel who performed examinations during 2RE02 and their NDE certification level for each applicable examination technique 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 UT examinations except for carbon steel piping welds, selected stainless steel piping welds, and Reactor Vessel flange-to-shell weld in accordance with SwRI NDE procedures approved by HL&P. HL&P QC NDE personnel performed all MT, PT, and VT examinations and UT examinations on carbon steel piping welds, selected stainless steel piping welds, and Reactor Vessel flange-to-shell weld in accordance with HL&P QC NDE procedures.

The NDE 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 interim change notices (ICN). A list of the applicable NDE 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 identification marking, indication recording, UT linearity measurements, and use of customer notification forms (CNF). 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 and Krautkramer Branson ultrasonic instruments
- Ultrasonic transducers
- AC electromagnetic yokes
- MT calibration block
- Pyrometers/Thermometers

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

### 2.3.4 Materials

NDE materials utilized during 2RE02 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 and vessel 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 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 NDE procedures and/or HL&P QC NDE procedures:

#### VT Examinations

VT-1 examinations were performed on bolting.

VT-3 examination was performed on a valve internal surface.



### PT Examinations

PT examinations were performed on Class 1 and 2 piping welds, Class 2 steam generator integral attachments, and Class 2 pump casing welds.

### MT Examinations

MT examinations were performed on Class 2 piping welds and a Class 2 nozzle-to-shell weld.

### UT Examinations

UT examinations were performed on Class 1 and 2 components, including 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 - NRCB 88-08
- Augmented ISI - Break Exclusion Zone
- Augmented ISI - IEB 79-17

These augmented programs are described in the 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.

If flaws were recorded in the selected component weld or examination area during previous examinations and dispositioned as acceptable, these flaws were verified during this ISI. All such flaws were observed and verified during this ISI.

#### 2.4.4 Additional and Successive Examinations

If examinations reveal indications that exceed allowable indications standards, additional examinations are required as prescribed in IWB-2430 and IWC-2430. No additional examinations (IWB-2430 or IWC-2430) were required during this outage.

Successive examinations are required if flaw indications are evaluated in accordance with IWB-3122.4 and the component qualifies as acceptable for continued service. No 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, the amount of coverage achieved was assessed. Appendix 2-D, ISI Examination Limitations, contains a detailed account of all examination limitations (UT, PT, and MT) encountered during 2RE02 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 volumetric (UT), surface (PT and MT), or visual (VT) examinations.

#### 2.6 Certification of Inspections

ASME Section XI NIS-1 forms, "Owner's Report for Inservice Inspections", have been prepared to certify the STPEGS-2 weld ISI examinations described in this section of the Summary Report. The STPEGS-2 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

DATE: 02/06/92  
 REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
 INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RE02  
 FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
 CLASS 1 COMPLETED COMPONENTS

PAGE: 1

REACTOR PRESSURE VESSEL

| SUMMARY EXAMINATION AREA |  |  |  | ASME                     | M | D                         |
|--------------------------|--|--|--|--------------------------|---|---------------------------|
| NUMBER IDENTIFICATION    |  |  |  | SEC. XI                  | D | G T                       |
|                          |  |  |  | CATGY EXAM               | R | E H                       |
|                          |  |  |  | ITEM NO METHOD PROCEDURE | E | D E REMARKS               |
|                          |  |  |  |                          | C | H R **CALIBRATION BLOCK** |
| *****                    |  |  |  |                          |   |                           |

CIRCUMFERENTIAL VESSEL WELDS (FIG NO A-RPV-1)

|                             |                       |       |       |            |   |   |                                       |
|-----------------------------|-----------------------|-------|-------|------------|---|---|---------------------------------------|
| 000100                      | RPV2-101-121          | B-A   | UT1.5 | UT1-013 RD | X | - | 91 - EXAMINED 50% (281 INCHES) OF THE |
|                             | FLANGE TO UPPER SHELL | B1.30 | UT5   |            | X | - | WELD LENGTH FROM STUD HOLES 9 TO 28.  |
|                             |                       |       | UT9   |            | X | - |                                       |
| **CSCL-91/CSCL-92/CSCL-93** |                       |       |       |            |   |   |                                       |

DATE: 02/06/92  
 REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
 INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2R02  
 FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
 CLASS 1 COMPLETED COMPONENTS

PAGE: 2

PRESSURIZER (FIGURE A-PRZ-1)

|                          |  | ASME | SEC. XI | CATGY | EXAM | ITEM NO | METHOD | PROCEDURE | H | D | REMARKS |
|--------------------------|--|------|---------|-------|------|---------|--------|-----------|---|---|---------|
| SUMMARY EXAMINATION AREA |  |      |         |       |      |         |        |           |   |   |         |
| NUMBER IDENTIFICATION    |  |      |         |       |      |         |        |           |   |   |         |
| *****                    |  |      |         |       |      |         |        |           |   |   | *****   |

NOZZLE TO SHELL AND SHELL TO NOZZLE WELDS

|        |              |        |       |                |   |   |   |  |
|--------|--------------|--------|-------|----------------|---|---|---|--|
| 010500 | PRZ-2-W1     | B-D    | UTOW  | STP-UT49 R1,CD | X | - | - | 91 - NO UT FROM THE NOZZLE SIDE DUE TO |
|        | SURGE NOZZLE | B3.110 | UT45  | STP-UT15 R0,CD | X | - | - | NOZZLE CONFIGURATION.                  |
|        |              |        | UT45T | ICN 1          | X | - | - |  |
|        |              |        | UT60  |                | X | - | - |  |
|        |              |        | UT60T |                | X | - | - | **CSCL-56**                            |

NOZZLE INSIDE RADIUS SECTION

|        |              |        |      |                |   |   |   |  |
|--------|--------------|--------|------|----------------|---|---|---|--|
| 011100 | PRZ-2-W1-1R  | B-D    | UT2B | STP-UT11 R0,CD | X | - | - |  |
|        | SURGE NOZZLE | B3.120 | UT33 | ICN 1          | X | - | - |  |
|        |              |        |      |                |   |   |   |  |
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DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2R02  
FIRs, INTERVAL, FIRST PERIOD, SECOND OUTAGE (9IRF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 3

STEAM GENERATOR 2A (PRIMARY SIDE) (FIGURE A-SG-1)

| SUMMARY EXAMINATION AREA |  | ASME    |        |           | N | O |                       |
|--------------------------|--|---------|--------|-----------|---|---|-----------------------|
| NUMBER IDENTIFICATION    |  | SEC. XI | CATY   | EXAM      |   |   |                       |
|                          |  | ITEM NO | METHOD | PROCEDURE | C | M | R                     |
|                          |  |         |        |           |   |   | REMARKS               |
|                          |  |         |        |           |   |   | **CALIBRATION BLOCK** |

HEAD WELDS

|        |                             |       |       |                |   |   |   |  |
|--------|-----------------------------|-------|-------|----------------|---|---|---|--|
| 015000 | SG-2A-SR1                   | B-B   | UTOW  | STP-UT49 R1,CO | X | - | - | 91 - NO UT FROM THE SUPPORT RING SIDE    |
|        | CHANNEL HEAD CAP TO SUPPORT | B2.31 | UT45  | STP-UT15 R0,CO | X | - | - | DUE TO SUPPORT RING CONFIGURATION.       |
|        | RING                        |       | UT45T | ICN 1          | X | - | - |  |
|        |                             |       | UT60  |                | X | - | - |  |
|        |                             |       | UT60T |                | X | - | - | **CSCL-B9**                              |
| 015100 | SG-2A-SR2                   | B-B   | UTOW  | STP-UT49 R1,CO | X | - | - | 91 - LIMITED UT FROM THE TUBE PLATE SIDE |
|        | SUPPORT RING TO TUBE PLATE  | B2.40 | UT45  | STP-UT15 R0,CO | - | X | - | DUE TO PROXIMITY OF WELDED PLATES. NO    |
|        |                             |       | UT45T | ICN 1          | X | - | - | UT FROM THE SUPPORT RING SIDE DUE TO     |
|        |                             |       | UT60  |                | - | X | - | SUPPORT RING CONFIGURATION.              |
|        |                             |       | UT60T |                | X | - | - | **CSCL-B9**                              |

NOZZLE TO VESSEL LOWER HEAD WELDS

|        |                              |        |       |                |   |   |   |  |
|--------|------------------------------|--------|-------|----------------|---|---|---|--|
| 015200 | SG-2A-IN                     | B-D    | UTOW  | STP-UT49 R1,CO | X | - | - | 91 - LIMITED UT FROM THE NOZZLE SIDE DUE |
|        | INLET NOZZLE TO CHANNEL HEAD | B3.130 | UT45  | STP-UT15 R0,CO | X | - | - | TO NOZZLE CONFIGURATION AND FROM THE     |
|        | CAP                          |        | UT45T | ICN 1          | X | - | - | HEAD DUE TO PROXIMITY OF VIBRATION       |
|        |                              |        | UT60  |                | X | - | - | SENSOR INSTRUMENTATION BOX.              |
|        |                              |        | UT60T |                | X | - | - | **CSCL-B9**                              |
| 015300 | SG-2A-ON                     | B-D    | UTOW  | STP-UT49 R1,CO | X | - | - | 91 - LIMITED UT FROM THE NOZZLE SIDE DUE |
|        | CHANNEL HEAD CAP TO OUTLET   | B3.130 | UT45  | STP-UT15 R0,CO | X | - | - | TO NOZZLE CONFIGURATION AND FROM THE     |
|        | NOZZLE                       |        | UT45T | ICN 1          | X | - | - | HEAD DUE TO PROXIMITY OF VIBRATION       |
|        |                              |        | UT60  |                | X | - | - | SENSOR INSTRUMENTATION BOX.              |
|        |                              |        | UT60T |                | X | - | - | **CSCL-B9**                              |

NOZZLE INSIDE RADIUS SECTION

|        |                            |        |      |                |   |   |   |  |
|--------|----------------------------|--------|------|----------------|---|---|---|--|
| 015400 | SG-2A-IN-IR                | B-D    | UT2B | STP-UT11 R0,CO | X | - | - |  |
|        | INLET NOZZLE INSIDE RADIUS | B3.140 |      | ICN 1          |   |   |   |  |
|        | SECTION                    |        |      |                |   |   |   |  |

\*\*CSCL-41\*\*

DATE: 02/06/92  
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SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 4

STEAM GENERATOR 2A (PRIMARY SIDE) (FIGURE A-SG-1)

|                          |                | ASME    |        |           | N                     | O |   |
|--------------------------|----------------|---------|--------|-----------|-----------------------|---|---|
|                          |                | SEC. XI |        |           | O                     | G | T |
|                          |                | CATGY   | EXAM   |           | R                     | E | H |
| SUMMARY EXAMINATION AREA |                | ITEM NO | METHOD | PROCEDURE | E                     | O | E |
| NUMBER                   | IDENTIFICATION |         |        |           | C                     | M | R |
|                          |                |         |        |           | REMARKS               |   |   |
|                          |                |         |        |           | **CALIBRATION BLOCK** |   |   |
| *****                    |                |         |        |           |                       |   |   |

NOZZLE INSIDE RADIUS SECTION

|        |                             |        |      |                |   |   |   |
|--------|-----------------------------|--------|------|----------------|---|---|---|
| 015500 | SG-2A-OW-IR                 | B-D    | UT2B | STP-UT11 R0,C0 | X | - | - |
|        | OUTLET NOZZLE INSIDE RADIUS | B3.140 |      | ICN 1          |   |   |   |
|        | SECTION                     |        |      |                |   |   |   |

\*\*CSCL-41\*\*

MANWAY BOLTING

|        |                      |       |      |             |   |   |   |
|--------|----------------------|-------|------|-------------|---|---|---|
| 015800 | SG-2A-IMB            | B-G-2 | VT-1 | NDEP 9.3 R1 | X | - | - |
|        | INLET MANWAY BOLTING | B7.30 |      |             |   |   |   |

|        |                       |       |      |             |   |   |   |
|--------|-----------------------|-------|------|-------------|---|---|---|
| 015900 | SG-2A-OMB             | B-G-2 | VT-1 | NDEP 9.3 R1 | X | - | - |
|        | OUTLET MANWAY BOLTING | B7.30 |      |             |   |   |   |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2R02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 5

STEAM GENERATOR 2D (PRIMARY SIDE) (FIGURE A-SG-2)

|                          |                |         |        |           |                       |   |   |
|--------------------------|----------------|---------|--------|-----------|-----------------------|---|---|
|                          |                |         |        |           | N                     | D |   |
|                          |                |         |        |           | O                     | G | T |
|                          |                |         |        |           | R                     | E | H |
| SUMMARY EXAMINATION AREA |                |         |        |           | E                     | O | E |
|                          |                |         |        |           | REMARKS               |   |   |
| NUMBER                   | IDENTIFICATION | ITEM NO | METHOD | PROCEDURE | C                     | M | R |
|                          |                |         |        |           | **CALIBRATION BLOCK** |   |   |

HEAD WELDS

|        |  |              |       |                |       |   |
|--------|--|--------------|-------|----------------|-------|---|
| 018000 | SG-2D-SR1<br>CHANNEL HEAD CAP TO SUPPORT<br>RING | B-B<br>B2.31 | UTOW  | STP-UT49 R1,CO | X - - | 91 - LIMITED UT FROM THE SUPPORT RING   |
|        |  |              | UT45  | STP-UT15 R0,CO | X - - | SIDE DUE TO SUPPORT RING CONFIGURATION. |
|        |  |              | UT45T | ICN 1          | X - - |   |
|        |  |              | UT60  |                | X - - |   |
|        |  |              | UT60T |                | X - - | **CSCL-B9**                             |
| 018100 | SG-2D-SR2<br>SUPPORT RING TO TUBE PLATE          | B-B<br>B2.40 | UTOW  | STP-UT49 R1,CO | X - - | 91 - LIMITED UT FROM THE SUPPORT RING   |
|        |  |              | UT45  | STP-UT15 R0,CO | - X - | SIDE DUE TO SUPPORT RING CONFIGURATION. |
|        |  |              | UT    | ICN 1          | X - - |   |
|        |  |              | UT60  |                | - X - |   |
|        |  |              | UT60T |                | X - - | **CSCL-B9**                             |

NOZZLE TO VESSEL LOWER HEAD WELDS

|        |  |               |       |                |       |  |
|--------|--|---------------|-------|----------------|-------|--|
| 018200 | SG-2D-IN<br>INLET NOZZLE TO CHANNEL HEAD<br>CAP  | B-D<br>B3.130 | UTOW  | STP-UT49 R1,CO | X - - | 91 - LIMITED UT FROM THE NOZZLE SIDE DUE |
|        |  |               | UT45  | STP-UT15 R0,CO | X - - | TO NOZZLE CONFIGURATION AND FROM THE     |
|        |  |               | UT45T | ICN 1          | X - - | HEAD DUE TO PROXIMITY OF VIBRATION       |
|        |  |               | UT60  |                | X - - | SENSOR INSTRUMENTATION BOX.              |
|        |  |               | UT60T |                | X - - | **CSCL-B9**                              |
| 018300 | SG-2D-ON<br>CHANNEL HEAD CAP TO OUTLET<br>NOZZLE | B-D<br>B3.130 | UTOW  | STP-UT49 R1,CO | X - - | 91 - LIMITED UT FROM THE NOZZLE SIDE DUE |
|        |  |               | UT45  | STP-UT15 R0,CO | X - - | TO NOZZLE CONFIGURATION AND FROM THE     |
|        |  |               | UT45T | ICN 1          | X - - | HEAD DUE TO PROXIMITY OF VIBRATION       |
|        |  |               | UT60  |                | X - - | SENSOR INSTRUMENTATION BOX.              |
|        |  |               | UT60T |                | X - - | **CSCL-B9**                              |

NOZZLE INSIDE RADIUS SECTION

|        |  |               |      |                         |       |  |
|--------|--|---------------|------|-------------------------|-------|--|
| 018400 | SG-2D-IN-IR<br>INLET NOZZLE INSIDE RADIUS<br>SECTION | B-D<br>B3.140 | UT28 | STP-UT11 R0,CO<br>ICN 1 | X - - |  |
|--------|--|---------------|------|-------------------------|-------|--|

\*\*CSCL-41\*\*



DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2REQ2  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 6

STEAM GENERATOR 2D (PRIMARY SIDE) (FIGURE A-SG-2)

|                          |  | ASME | SEC. XI | CAUSE | EXAM | ITEM NO | MEASUREMENT | PROCEDURE | N | O                     |   |
|--------------------------|--|------|---------|-------|------|---------|-------------|-----------|---|-----------------------|---|
|                          |  |      |         |       |      |         |             |           | O | G                     | T |
|                          |  |      |         |       |      |         |             |           | R | E                     | H |
| SUMMARY EXAMINATION AREA |  |      |         |       |      |         |             |           | E | O                     | E |
| NUMBER IDENTIFICATION    |  |      |         |       |      |         |             |           | C | M                     | R |
|                          |  |      |         |       |      |         |             |           |   | REMARKS               |   |
|                          |  |      |         |       |      |         |             |           |   | **CALIBRATION BLOCK** |   |

NOZZLE INSIDE RADIUS SECTION

|        |                             |        |      |                |   |   |   |
|--------|-----------------------------|--------|------|----------------|---|---|---|
| 018500 | SG-2D-ON-IR                 | B-D    | UT28 | STP-UT11 RD,CO | X | - | - |
|        | OUTLET NOZZLE INSIDE RADIUS | B3.140 |      | ICN 1          |   |   |   |
|        | SECTION                     |        |      |                |   |   |   |

\*\*CSCL-41\*\*

MANWAY BOLTING

|        |                       |       |      |             |   |   |   |
|--------|-----------------------|-------|------|-------------|---|---|---|
| 018800 | SG-2D-1MB             | B-G-2 | VT-1 | NDEP 9.3 R1 | X | - | - |
|        | INLET MANWAY BOLTING  | B7.30 |      |             |   |   |   |
| 018900 | SG-2D-OMB             | B-G-2 | VT-1 | NDEP 9.3 R1 | X | - | - |
|        | OUTLET MANWAY BOLTING | B7.30 |      |             |   |   |   |

DATE: 02/06/92  
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SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM (REO2)  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 7

REACTOR COOLANT SYSTEM

| SUMMARY EXAMINATION AREA |  | ASME    |        |           | N | O |                       |
|--------------------------|--|---------|--------|-----------|---|---|-----------------------|
|                          |  | SEC. XI |        |           | O | G | T                     |
|                          |  | CATGY   | EXAM   |           | R | E | N                     |
| NUMBER IDENTIFICATION    |  | ITEM NO | METHOD | PROCEDURE | E | O | E                     |
|                          |  |         |        |           | C | M | R                     |
|                          |  |         |        |           |   |   | REMARKS               |
|                          |  |         |        |           |   |   | **CALIBRATION BLOCK** |

31-RC-2102-NSS - LOOP 1 (FIG NO A-RC-1)

|        |                           |        |       |                |   |   |   |   |
|--------|---------------------------|--------|-------|----------------|---|---|---|---|
| 100000 | 1                         | B-F    | PT    | NDEP 6.2 R3    | X | - | - | PERFORMED UT45(RL) FROM THE ELBOW AND   |
|        | SG OUTLET NOZZLE TO ELBOW | B5.130 | UT45  | STP-UT54 RO,CO | - | X | - | NOZZLE SIDES (CSS-80), UT45T(RL) ON THE |
|        |                           |        | UT45T | ICN 1,2, & 3   | X | - | - | ELBOW SIDE (CSS-80), UT45T(RS) ON THE   |
|        |                           |        | UT60  | STP-UT31 RO,CO | X | - | - | WELD AND NOZZLE SIDE (SS-79), AND       |
|        |                           |        | UT45T | ICN 1 & 2      | X | - | - | UT60(RS) FROM THE NOZZLE SIDE (CS-78).  |
|        |                           |        |       |                |   |   |   | LIMITED UT DUE TO WELD AND NOZZLE       |
|        |                           |        |       |                |   |   |   | CONFIGURATION.                          |
|        |                           |        |       |                |   |   |   | **CS-78/SS-79/CSS-80**                  |

|        |                               |       |       |                |   |   |   |                                     |
|--------|-------------------------------|-------|-------|----------------|---|---|---|-------------------------------------|
| 100040 | 3                             | B-J   | PT    | NDEP 6.2 R3    | X | - | - |                                     |
|        | 3-IN. BRANCH CONNECTION       | B9.32 |       |                |   |   |   |                                     |
| 100080 | 9                             | B-J   | PT    | NDEP 6.2 R3    | X | - | - | 91 - LIMITED UT DUE TO WELD         |
|        | ELBOW TO REACTOR COOLANT PUMP | B9.11 | UT45  | STP-UT54 RO,CO | - | X | - | CONFIGURATION AND SEARCH UNIT SIZE. |
|        |                               |       | UT45T | ICN 1,2, & 3   | X | - | - |                                     |
|        |                               |       |       |                |   |   |   | **CSS-80**                          |

31-RC-2402-NSS - LOOP 4 (FIG NO A-RC-4)

|        |                           |        |       |                |   |   |   |   |
|--------|---------------------------|--------|-------|----------------|---|---|---|---|
| 100540 | 1                         | B-F    | PT    | NDEP 6.2 R3    | X | - | - | PERFORMED UT45(RL) FROM THE ELBOW AND   |
|        | SG OUTLET NOZZLE TO ELBOW | B5.130 | UT45  | STP-UT54 RO,CO | - | X | - | NOZZLE SIDES (CSS-80), UT45T(RL) ON THE |
|        |                           |        | UT45T | ICN 1,2, & 3   | X | - | - | ELBOW SIDE (CSS-80), UT45T(RS) ON THE   |
|        |                           |        | UT60  | STP-UT31 RO,CO | X | - | - | WELD AND NOZZLE SIDE (SS-79), AND       |
|        |                           |        | UT45T | ICN 1 & 2      | X | - | - | UT60(RS) FROM THE NOZZLE SIDE (CS-78).  |
|        |                           |        |       |                |   |   |   | LIMITED UT DUE TO WELD AND NOZZLE       |
|        |                           |        |       |                |   |   |   | CONFIGURATION.                          |
|        |                           |        |       |                |   |   |   | **CS-78/SS-79/CSS-80**                  |

29-RC-2101-NSS - LOOP 1 (FIG NO A-RC-1)

|        |                          |       |       |                |   |   |   |                                       |
|--------|--------------------------|-------|-------|----------------|---|---|---|---------------------------------------|
| 100740 | 3                        | B-J   | PT    | NDEP 6.2 R3    | X | - | - | PERFORMED UT24 FROM THE BRANCH        |
|        | 12-IN. BRANCH CONNECTION | B9.31 | UT24  | STP-UT53 RO,CO | X | - | - | CONNECTION TAPERED SURFACE AND        |
|        |                          |       |       | ICN 1          |   |   |   | UT45/UT45T FROM THE MAIN RUN OF PIPE. |
|        |                          |       | UT45  | STP-UT54 RO,CO | X | - | - | LIMITED UT DUE TO BC CONFIGURATION.   |
|        |                          |       | UT45T | ICN 1,2, & 3   | X | - | - | **CCSS-18/SS-82**                     |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2REC7  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 8

REACTOR COOLANT SYSTEM

| SUMMARY EXAMINATION AREA                             |                          | ASME    | SEC. XI | CATGY          | EXAM | PROCEDURE | N | D | G | T | M | E | H | E | O | E | REMARKS                                 |
|--|--------------------------|---------|---------|----------------|------|-----------|---|---|---|---|---|---|---|---|---|---|---|
| NUMBER   | IDENTIFICATION           | ITEM NO | METHOD  |                |      |           | C | M | R |   |   |   |   |   |   |   | **CALIBRATION BLOCK**                   |
| <hr/>  |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   |   |
| <u>29-RC-2101-NSS - LOOP 1 (FIG. NO. A-RC-1)</u>     |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   |   |
| 100760   | 5                        | B-F     | PT      | NDEP 6.2 R3    | X    | -         | - |   |   |   |   |   |   |   |   |   | PERFORMED UT45(RL) FROM THE ELBOW AND   |
|  | ELBOW TO SG INLET NOZZLE | B5.130  | UT45    | STP-UT54 RO,CO | -    | X         | - |   |   |   |   |   |   |   |   |   | NOZZLE SIDES (CSS-80), UT45T(RL) ON THE |
|  |                          |         | UT45T   | ICN 1,2, & 3   | X    | -         | - |   |   |   |   |   |   |   |   |   | ELBOW SIDE (CSS-80), UT45T(RS) ON THE   |
|  |                          |         | UT60    | STP-UT31 RO,CO | X    | -         | - |   |   |   |   |   |   |   |   |   | WELD AND NOZZLE SIDE (SS-79), AND       |
|  |                          |         | UT45T   | ICN 1 & 2      | X    | -         | - |   |   |   |   |   |   |   |   |   | UT60(RS) FROM THE NOZZLE SIDE (CS-78).  |
|  |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   | LIMITED UT DUE TO WELD AND NOZZLE       |
|  |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   | CONFIGURATION.                          |
|  |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   | **CS-78/SS-79/CSS-80**                  |
| <br><u>29-RC-2401-NSS - LOOP 4 (FIG. NO. A-RC-4)</u> |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   |   |
| 101170   | 4                        | B-F     | PT      | NDEP 6.2 R3    | X    | -         | - |   |   |   |   |   |   |   |   |   | PERFORMED UT45(RL) FROM THE ELBOW AND   |
|  | ELBOW TO SG INLET NOZZLE | B5.130  | UT45    | STP-UT54 RO,CO | -    | X         | - |   |   |   |   |   |   |   |   |   | NOZZLE SIDES (CSS-80), UT45T(RL) ON THE |
|  |                          |         | UT45T   | ICN 1,2, & 3   | X    | -         | - |   |   |   |   |   |   |   |   |   | ELBOW SIDE (CSS-80), UT45T(RS) ON THE   |
|  |                          |         | UT60    | STP-UT51 RO,CO | X    | -         | - |   |   |   |   |   |   |   |   |   | WELD AND NOZZLE SIDE (SS-79), AND       |
|  |                          |         | UT45T   | ICN 1 & 2      | X    | -         | - |   |   |   |   |   |   |   |   |   | UT45T(RS) FROM THE NOZZLE SIDE (CS-78). |
|  |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   | LIMITED UT DUE TO WELD AND NOZZLE       |
|  |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   | CONFIGURATION.                          |
|  |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   | **CS-78/SS-79/CSS-80**                  |
| <br><u>12-RC-2112-BB1 (FIG. NO. A-RC-B)</u>          |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   |   |
| 102040   | 2                        | B-J     | PT      | NDEP 6.2 R3    | X    | -         | - |   |   |   |   |   |   |   |   |   |   |
|  | PIPE TO ELBOW            | B9.11   | UT45    | STP-UT52 RO,CO | -    | X         | - |   |   |   |   |   |   |   |   |   |   |
|  |                          |         | UT45T   | ICN 1          | X    | -         | - |   |   |   |   |   |   |   |   |   | **SS-21**                               |
| 102090   | 7                        | B-J     | PT      | NDEP 6.2 R3    | X    | -         | - |   |   |   |   |   |   |   |   |   |   |
|  | ELBOW TO PIPE            | B9.11   | UT45    | STP-UT52 RO,CO | -    | X         | - |   |   |   |   |   |   |   |   |   |   |
|  |                          |         | UT45T   | ICN 1          | X    | -         | - |   |   |   |   |   |   |   |   |   | **SS-21**                               |
| 102130   | 11                       | B-J     | PT      | NDEP 6.2 R3    | X    | -         | - |   |   |   |   |   |   |   |   |   |   |
|  | PIPE TO VALVE            | B9.11   | UT45    | STP-UT52 RO,CO | -    | X         | - |   |   |   |   |   |   |   |   |   | 91 - USE UT60 REFRACTED SHEAR FOR       |
|  |                          |         | UT45T   | ICN 1          | X    | -         | - |   |   |   |   |   |   |   |   |   | ADDITIONAL COVERAGE.                    |
|  |                          |         |         |                |      |           |   |   |   |   |   |   |   |   |   |   | **SS-21**                               |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RED2  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 9

REACTOR COOLANT SYSTEM

| SUMMARY EXAMINATION AREA              |                           | ASME  | SEC. XI | CATGY          | EXAM | ITEM NO | METHOD | PROCEDURE | N | D | O | G | T | R | E | H | E | O | E | REMARKS   |
|---------------------------------------|---------------------------|-------|---------|----------------|------|---------|--------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|
| NUMBER                                | IDENTIFICATION            |       |         |                |      |         |        |           | C | M | R |   |   |   |   |   |   |   |   | **CALIBRATION BLOCK**                                   |
| -----                                 |                           |       |         |                |      |         |        |           |   |   |   |   |   |   |   |   |   |   |   |   |
| <u>12-RC-2125-BB1 (FIG NO A-RC-9)</u> |                           |       |         |                |      |         |        |           |   |   |   |   |   |   |   |   |   |   |   |   |
| 102240                                | 2                         | B-J   | PT      | NDEP 6.2 R3    |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   | 91 - HANGER HL5009 REMOVED FOR ACCESS.                  |
|                                       | PIPE TO ELBOW             | B9.11 | UT45    | STP-UT52 RO,CO |      |         |        |           | - | X | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       | UT45T   | ICN 1          |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   | **SS-21**   |
| 102250                                | 3                         | B-J   | PT      | NDEP 6.2 R3    |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   |   |
|                                       | ELBOW TO PIPE             | B9.11 | UT45    | STP-UT52 RO,CO |      |         |        |           | - | X | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       | UT45T   | ICN 1          |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   | **SS-21**   |
| 102360                                | 14                        | B-J   | PT      | NDEP 6.2 R3    |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   |   |
|                                       | PIPE TO BRANCH CONNECTION | B9.11 | UT45    | STP-UT52 RO,CO |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   | 91 - USED UT60 REFRACTED SHEAR FOR ADDITIONAL COVERAGE. |
|                                       |                           |       | UT45T   | ICN 1          |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       | UT60    | STP-UT31 RO,CO |      |         |        |           | - | X | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       |         | ICN 1 & 2      |      |         |        |           |   |   |   |   |   |   |   |   |   |   |   | **SS-21**   |
| <u>8-RC-2114-BB1 (FIG NO A-RC-12)</u> |                           |       |         |                |      |         |        |           |   |   |   |   |   |   |   |   |   |   |   |   |
| 103190                                | 1                         | B-J   | PT      | NDEP 6.2 R3    |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   |   |
|                                       | VALVE TO PIPE             | B9.11 | UT45    | STP-UT52 RO,CO |      |         |        |           | - | X | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       | UT45T   | ICN 1          |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       | UT60    | STP-UT31 RO,CO |      |         |        |           | - | X | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       |         | ICN 1 & 2      |      |         |        |           |   |   |   |   |   |   |   |   |   |   |   | **SS-11**   |
| <u>6-RC-2063-BB1 (FIG NO A-RC-13)</u> |                           |       |         |                |      |         |        |           |   |   |   |   |   |   |   |   |   |   |   |   |
| 103754                                | 11A                       | B-J   | PT      | NDEP 6.2 R4    |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   |   |
|                                       | PIPE TO TEE               | B9.11 | UT45    | UT1-004 RO     |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       | UT45T   | UT1-001 R1     |      |         |        |           | - | X | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       |         |                |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   | **SS-B**  |
| 103756                                | 11B                       | B-J   | PT      | NDEP 6.2 R4    |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   |   |
|                                       | TEE TO PIPE               | B9.11 | UT0L    | UT1-004 RO     |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       | UT45    | UT1-001 R1     |      |         |        |           | - | X | - |   |   |   |   |   |   |   |   |   |
|                                       |                           |       | UT45T   |                |      |         |        |           | X | - | - |   |   |   |   |   |   |   |   | **SS-B**  |

DATE: 02/06/92

REVISION: 0

## SOUTH TEXAS PROJECT UNIT 2

PAGE: 10

INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2R02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTSREACTOR COOLANT SYSTEM

| SUMMARY EXAMINATION AREA              |                       | ASME  | SEC. XI | CATGY | EXAM                             | ITEM NO | METHOD | PROCEDURE | N | O | REMARKS   |
|---------------------------------------|-----------------------|-------|---------|-------|----------------------------------|---------|--------|-----------|---|---|---|
| NUMBER                                | IDENTIFICATION        |       |         |       |                                  |         |        |           | C | M | R   |
| *****                                 |                       |       |         |       |                                  |         |        |           |   |   |   |
| <u>6-RC-2009-NSS (FIG NO A-RC-6)</u>  |                       |       |         |       |                                  |         |        |           |   |   |   |
| 104130                                | 9FB<br>FLANGE BOLTING | B-G-2 | VT-1    | B7.50 | NDEP 9.3 R1                      | X       | -      | -         |   |   | 91 - BASELINE EXAMINATION OF BOLTING<br>REPLACED PER R&R NO. 2-91-061 (REF WR#<br>RC-115651). |
| <u>4-RC-2126-BB1 (FIG NO A-RC-11)</u> |                       |       |         |       |                                  |         |        |           |   |   |   |
| 105250                                | 1<br>VALVE TO PIPE    | B-J   | PT      | B9.11 | NDEP 6.2 R3<br>UT45<br>UT45T     | X       | -      | -         |   |   | **SS-7**  |
|                                       |                       |       |         |       | STP-UT31 R0,C0<br>ICN 1 & 2      | X       | -      | -         |   |   |   |
|                                       |                       |       |         |       |                                  | X       | -      | -         |   |   |   |
| 105255                                | 1<br>VALVE TO PIPE    | NRCB  | UT45    | 88-08 | STP-UT12B R0,C1<br>UT45T<br>UT60 | X       | -      | -         |   |   | 91 - AUGMENTED ISI - NRCB 88-08.<br><br>**SS-7**  |
|                                       |                       |       |         |       |                                  | X       | -      | -         |   |   |   |
|                                       |                       |       |         |       |                                  | -       | X      | -         |   |   |   |
| 105260                                | 2<br>PIPE TO ELBOW    | B-J   | PT      | B9.11 | NDEP 6.2 R3<br>UT45<br>UT45T     | X       | -      | -         |   |   | **SS-7**  |
|                                       |                       |       |         |       | STP-UT31 R0,C0<br>ICN 1 & 2      | X       | -      | -         |   |   |   |
|                                       |                       |       |         |       |                                  | X       | -      | -         |   |   |   |
| 105265                                | 2<br>PIPE TO ELBOW    | NRCB  | UT45    | 88-08 | STP-UT12B R0,C1<br>UT45T<br>UT60 | X       | -      | -         |   |   | 91 - AUGMENTED ISI - NRCB 88-08.<br><br>**SS-7**  |
|                                       |                       |       |         |       |                                  | X       | -      | -         |   |   |   |
|                                       |                       |       |         |       |                                  | -       | X      | -         |   |   |   |
| 105270                                | 3<br>ELBOW TO PIPE    | B-J   | PT      | B9.11 | NDEP 6.2 R3<br>UT45<br>UT45T     | X       | -      | -         |   |   | **SS-7**  |
|                                       |                       |       |         |       | STP-UT31 R0,C0<br>ICN 1 & 2      | X       | -      | -         |   |   |   |
|                                       |                       |       |         |       |                                  | X       | -      | -         |   |   |   |
| 105275                                | 3<br>ELBOW TO PIPE    | NRCB  | UT45    | 88-08 | STP-UT12B R0,C1<br>UT45T<br>UT60 | X       | -      | -         |   |   | 91 - AUGMENTED ISI - NRCB 88-08.<br><br>**SS-7**  |
|                                       |                       |       |         |       |                                  | X       | -      | -         |   |   |   |
|                                       |                       |       |         |       |                                  | -       | X      | -         |   |   |   |

DATE: 02/06/92

REVISION: 0

SOUTH TEXAS PROJECT UNIT 2

PAGE: 11

INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RED2

FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)

CLASS 1 COMPLETED COMPONENTS

REACTOR COOLANT SYSTEM

|                                       |                      |         |        |                 | N   | O |   |
|---------------------------------------|----------------------|---------|--------|-----------------|---|---|---|
|                                       |                      |         |        |                 | O   | G | T |
|                                       |                      |         |        |                 | R   | E | H |
| SUMMARY EXAMINATION AREA              |                      |         |        |                 | E   | O | E |
| NUMBER                                | IDENTIFICATION       | ITEM NO | METHOD | PROCEDURE       | C   | M | R |
|                                       |                      |         |        |                 | REMARKS   |   |   |
|                                       |                      |         |        |                 | **CALIBRATION BLOCK**                                   |   |   |
| <u>4-RC-2323-BB1 (FIG NO A-RC-11)</u> |                      |         |        |                 |   |   |   |
| 105610                                | 1                    | B-J     | PT     | NDEP 6.2 R3     | X   | - | - |
|                                       | VALVE TO PIPE        | B9.11   | UT45   | STP-UT31 R0,C0  | X   | - | - |
|                                       |                      |         | UT45T  | ICN 1 & 2       | X   | - | - |
|                                       |                      |         | UT60   |                 | X   | - | - |
|                                       |                      |         |        |                 | 91 - USED UT60 REFRACTED SHEAR FOR ADDITIONAL COVERAGE. |   |   |
|                                       |                      |         |        |                 | **SS-7**  |   |   |
| 105615                                | 1                    | NRCB    | UT45   | STP-UT128 R0,C1 | X   | - | - |
|                                       | VALVE TO PIPE        | BB-08   | UT45T  |                 | X   | - | - |
|                                       |                      |         | UT60   |                 | -   | X | - |
|                                       |                      |         |        |                 | 91 - AUGMENTED ISI - NRCB BB-08.                        |   |   |
|                                       |                      |         |        |                 | **SS-7**  |   |   |
| 105620                                | 2                    | B-J     | PT     | NDEP 6.2 R3     | X   | - | - |
|                                       | PIPE TO ELBOW        | B9.11   | UT45   | STP-UT31 R0,C0  | X   | - | - |
|                                       |                      |         | UT45T  | ICN 1 & 2       | X   | - | - |
|                                       |                      |         |        |                 | 91 - AUGMENTED ISI - NRCB BB-08.                        |   |   |
|                                       |                      |         |        |                 | **SS-7**  |   |   |
| 105623                                | 2                    | NRCB    | UT45   | STP-UT128 R0,C1 | X   | - | - |
|                                       | PIPE TO ELBOW        | BB-08   | UT45T  |                 | X   | - | - |
|                                       |                      |         | UT60   |                 | -   | X | - |
|                                       |                      |         |        |                 | 91 - AUGMENTED ISI - NRCB BB-08.                        |   |   |
|                                       |                      |         |        |                 | **SS-7**  |   |   |
| <u>3-RC-2003-BB1 (FIG NO A-RC-13)</u> |                      |         |        |                 |   |   |   |
| 106200                                | 1                    | B-J     | PT     | NDEP 6.2 R3     | X   | - | - |
|                                       | REDUCER TO PIPE      | B9.21   |        |                 |   |   |   |
| 106205                                | 1                    | NRCB    | UT45   | STP-UT128 R0,C1 | X   | - | - |
|                                       | REDUCER TO PIPE      | BB-08   | UT45T  |                 | X   | - | - |
|                                       |                      |         | UT60   |                 | X   | - | - |
|                                       |                      |         |        |                 | 91 - AUGMENTED ISI - NRCB BB-08.                        |   |   |
|                                       |                      |         |        |                 | **SS-94**   |   |   |
| 106210                                | 2                    | B-J     | PT     | NDEP 6.2 R3     | X   | - | - |
|                                       | PIPE TO REDUCING TEE | B9.21   |        |                 |   |   |   |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 12

REACTOR COOLANT SYSTEM

|                          |       |         |         |            | N | O |   |                       |
|--------------------------|-------|---------|---------|------------|---|---|---|-----------------------|
|                          |       |         |         |            | O | G | T |                       |
|                          |       |         |         |            | R | E | H |                       |
|                          |       |         |         |            | E | O | E | REMARKS               |
| SUMMARY EXAMINATION AREA |       | ASME    | SEC. XI | CATGY EXAM |   |   |   |                       |
| NUMBER IDENTIFICATION    |       | ITEM NO | METHOD  | PROCEDURE  | C | M | R | **CALIBRATION BLOCK** |
| *****                    | ***** | *****   | *****   | *****      | + | - | - | *****                 |

2,5-RC-2003-BB1 (FIG NO A-RC-13)

|        |               |       |    |             |   |   |   |                            |
|--------|---------------|-------|----|-------------|---|---|---|----------------------------|
| 107900 | 1             | B-J   | PT | NDEP 6.2 R4 | X | - | - | 91 - BASELINE EXAMINATION. |
|        | TEE TO PIPE   | B9.21 |    |             |   |   |   |                            |
| 107910 | 2             | B-J   | PT | NDEP 6.2 R4 | X | - | - | 91 - BASELINE EXAMINATION. |
|        | PIPE TO ELBOW | B9.21 |    |             |   |   |   |                            |
| 107920 | 3             | B-J   | PT | NDEP 6.2 R4 | X | - | - | 91 - BASELINE EXAMINATION. |
|        | ELBOW TO PIPE | B9.21 |    |             |   |   |   |                            |
| 107930 | 4             | B-J   | PT | NDEP 6.2 R4 | X | - | - | 91 - BASELINE EXAMINATION. |
|        | PIPE TO VALVE | B9.21 |    |             |   |   |   |                            |
| 107940 | 5             | B-J   | PT | NDEP 6.2 R4 | X | - | - | 91 - BASELINE EXAMINATION. |
|        | VALVE TO PIPE | B9.21 |    |             |   |   |   |                            |
| 107950 | 6             | B-J   | PT | NDEP 6.2 R4 | X | - | - | 91 - BASELINE EXAMINATION. |
|        | PIPE TO VALVE | B9.21 |    |             |   |   |   |                            |

2-RC-2003-P01 (FIG NO A-RC-13)

|            |               |       |       |                 |   |   |   |                                  |
|------------|---------------|-------|-------|-----------------|---|---|---|----------------------------------|
| 107960     | 1             | B-J   | PT    | NDEP 6.2 R3     | X | - | - |                                  |
|            | VALVE TO PIPE | B9.21 |       |                 |   |   |   |                                  |
| 107965     | 1             | NRCB  | UT0L  | STP-UT49 R1,C0  | X | - | - | 91 - AUGMENTED ISI - NRCB 88-08. |
|            | VALVE TO PIPE | 88-08 | UT45  | STP-UT128 R0,C1 | X | - | - |                                  |
|            |               |       | UT45T |                 | X | - | - |                                  |
|            |               |       | UT60  |                 | X | - | - |                                  |
| ***SS-95** |               |       |       |                 |   |   |   |                                  |

DATE: 02/06/92  
 REVISION: U

SOUTH TEXAS PROJECT UNIT 2  
 INSERVICE INSPECTION SUMMARY - WELDS PROGRAM ZRE02  
 FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
 CLASS 1 COMPLETED COMPONENTS

PAGE: 13

REACTOR COOLANT SYSTEM

|                          |         |        |           | N                     | O |   |
|--------------------------|---------|--------|-----------|-----------------------|---|---|
|                          |         |        |           | O                     | G | T |
|                          |         |        |           | R                     | E | H |
| SUMMARY EXAMINATION AREA | CATGY   | EXAM   |           | E                     | O | E |
| NUMBER IDENTIFICATION    | ITEM NO | METHOD | PROCEDURE | C                     | M | R |
|                          |         |        |           | REMARKS               |   |   |
|                          |         |        |           | **CALIBRATION BLOCK** |   |   |

2-RC-2003-BB1 (FIG NO A-RC-13)

|           |                 |       |       |                 |   |   |   |                                  |
|-----------|-----------------|-------|-------|-----------------|---|---|---|----------------------------------|
| 107970    | 2               | B-J   | PT    | NDEP 6.2 R3     | X | - | - |                                  |
|           | PIPE TO REDUCER | B9.21 |       |                 |   |   |   |                                  |
| 107975    | 2               | NRCB  | UTOL  | STP-UT49 R1,C0  | X | - | - | 91 - AUGMENTED ISI - NRCB 88-08. |
|           | PIPE TO REDUCER | B8-08 | UT45  | STP-UT128 R0,C1 | X | - | - |                                  |
|           |                 |       | UT45T |                 | X | - | - |                                  |
|           |                 |       | UT60  |                 | X | - | - |                                  |
| **SS-95** |                 |       |       |                 |   |   |   |                                  |



DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 14

SAFETY INJECTION SYSTEM

| SUMMARY EXAMINATION AREA              |               | ASME    |        |                | N | O |   |
|---------------------------------------|---------------|---------|--------|----------------|---|---|---|
|                                       |               | SNC. XI |        |                | O | G | T                                       |
|                                       |               | CATGY   | EXAM   |                | R | E | H                                       |
| NUMBER IDENTIFICATION                 |               | ITEM NO | METHOD | PROCEDURE      | E | O | E                                       |
|                                       |               |         |        |                | C | M | R                                       |
|                                       |               |         |        |                |   |   | REMARKS                                 |
|                                       |               |         |        |                |   |   | **CALIBRATION BLOCK**                   |
| <hr/>                                 |               |         |        |                |   |   |   |
| <u>12-SI-2125-BB1 (FIG NO A-SI-1)</u> |               |         |        |                |   |   |   |
| 230060                                | 4             | B-J     | PT     | NDEP 6.2 R3    | X | - | 91 - USED UT60 REFRACTED SHEAR FOR      |
|                                       | PIPE TO VALVE | B9.11   | UTOW   | STP-UT49 R1,CO | - | - | ADDITIONAL COVERAGE. THREE (3) UTO CODE |
|                                       |               |         | UT45   | STP-UT52 R0,CO | - | X | ALLOWABLE INDICATIONS.                  |
|                                       |               |         | UT45T  | ICN 1          | X | - |   |
|                                       |               |         | UT60   | STP-UT31 R0,CO | - | X | **SS-21**                               |
|                                       |               |         |        | ICN 1 & 2      |   |   |   |
| <br>                                  |               |         |        |                |   |   |   |
| <u>8-SI-2108-BB1 (FIG NO A-SI-3)</u>  |               |         |        |                |   |   |   |
| 230900                                | 2             | B-J     | PT     | NDEP 6.2 R3    | X | - | 91 - USED UT45 REFRACTED SHEAR FOR      |
|                                       | PIPE TO TEE   | B9.11   | UT45   | STP-UT52 R0,CO | - | X | ADDITIONAL COVERAGE.                    |
|                                       |               |         | UT45T  | ICN 1          | X | - |   |
|                                       |               |         | UT45   | STP-UT31 R0,CO | X | - |   |
|                                       |               |         |        | ICN 1 & 2      |   |   | **SS-11**                               |
| <br>                                  |               |         |        |                |   |   |   |
| 230940                                | 4             | B-J     | PT     | NDEP 6.2 R3    | X | - |   |
|                                       | PIPE TO PIPE  | B9.11   | UT45   | STP-UT52 R0,CO | X | - |   |
|                                       |               |         | UT45T  | ICN 1          | X | - |   |
|                                       |               |         |        |                |   |   | **SS-11**                               |
| <br>                                  |               |         |        |                |   |   |   |
| <u>6-SI-2108-BB1 (FIG NO A-SI-3)</u>  |               |         |        |                |   |   |   |
| 231840                                | 3             | B-J     | PT     | NDEP 6.2 R3    | X | - | 91 - TWO (2) UTO CODE ALLOWABLE         |
|                                       | ELBOW TO PIPE | B9.11   | UTOW   | UT1-004 R0     | - | - | INDICATIONS.                            |
|                                       |               |         | UT45   | UT1-001 R1     | - | X |   |
|                                       |               |         | UT45T  |                | X | - |   |
|                                       |               |         |        |                |   |   | **SS-Q**                                |
| <br>                                  |               |         |        |                |   |   |   |
| <u>6-SI-2111-BB1 (FIG NO A-SI-3)</u>  |               |         |        |                |   |   |   |
| 232060                                | 1             | B-J     | PT     | NDEP 6.2 R3    | X | - | 91 - USED UT60 REFRACTED SHEAR FOR      |
|                                       | VALVE TO PIPE | B9.11   | UT45   | UT1-001 R1     | - | X | ADDITIONAL COVERAGE.                    |
|                                       |               |         | UT45T  |                | X | - |   |
|                                       |               |         | UT60   | UT1-005 R0     | - | X |   |
|                                       |               |         |        |                |   |   | **SS-B**                                |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RED2  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 15

VALVES

| SUMMARY EXAMINATION AREA                             | ASME    |       |      |             |        |           |  |
|--|---------|-------|------|-------------|--------|-----------|--|
| NUMBER IDENTIFICATION                                | SEC. XI | CATGY | EXAM | ITEM NO     | METHOD | PROCEDURE | REMARKS  |
|  |         |       |      |             |        |           |  |
|  |         |       |      |             |        |           | **CALIBRATION BLOCK**  |
| <u>VALVE GROUP 5</u>                                 |         |       |      |             |        |           |  |
| 264330 XS10046C-VB ON 12-S1-2315<br>FIG. NO. A-S1-2  | B-G-2   | VT-1  |      | NDEP 9.3 R1 | X - -  |           | VALVE GROUP 5<br>EXAMINED THE BOLTING OF THE VALVE WHOSE<br>INTERNAL SURFACES WERE EXAMINED. |
| 264350 XS10046C-VIS ON 12-S1-2315<br>FIG. NO. A-S1-2 | B-M-2   | VT-3  |      | NDEP 9.3 R1 | X - -  |           | 91 - VALVE GROUP 5<br>EXAMINED WHEN OPENED FOR MAINTENANCE PER<br>MWR-SI-90698.              |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM ZRE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 16

STEAM GENERATOR 2A (SECONDARY SIDE)

| SUMMARY EXAMINATION AREA |                | ASME    |        |           | N | O | REMARKS               |
|--------------------------|----------------|---------|--------|-----------|---|---|-----------------------|
|                          |                | SEC. XI |        |           | O | G |                       |
|                          |                | CATGY   | EXAM   | PROCEDURE | R | E |                       |
| NUMBER                   | IDENTIFICATION | ITEM NO | METHOD |           | E | O |                       |
|                          |                |         |        |           | C | M | **CALIBRATION BLOCK** |

CIRCUMFERENTIAL WELDS (FIG NO B-SG-1)

|        |                                |       |       |                |   |   |   |                                 |
|--------|--------------------------------|-------|-------|----------------|---|---|---|---------------------------------|
| 300200 | SG-2A-S5                       | C-A   | UTOW  | STP-UT49 R1,C0 | - | - | X | 91 - TWO (2) UT0 CODE ALLOWABLE |
|        | TRANSITION CONE TO UPPER SHELL | C1.10 | UT45  | STP-UT15 R0,C0 | X | - | - | INDICATIONS.                    |
|        | SECTION C                      |       | UT45T | ICN 1          | X | - | - |                                 |
|        |                                |       | UT60  |                | X | - | - |                                 |
|        |                                |       | UT60T |                | X | - | - | **CS-54**                       |
| 300300 | SG-2A-S7                       | C-A   | UTOW  | STP-UT49 R1,C0 | X | - | - |                                 |
|        | UPPER SHELL SECTION D TO UPPER | C1.20 | UT45  | STP-UT15 R0,C0 | - | X | - |                                 |
|        | HEAD                           |       | UT45T | ICN 1          | X | - | - |                                 |
|        |                                |       | UT60  |                | X | - | - |                                 |
|        |                                |       | UT60T |                | X | - | - | **CS-54**                       |

NOZZLE TO SHELL WELDS AND INSIDE RADIUS SECTIONS (FIG NO B-SG-1)

|        |                               |       |       |                |   |   |   |           |
|--------|-------------------------------|-------|-------|----------------|---|---|---|-----------|
| 300450 | SG-2A-AF9                     | C-B   | MT    | NDEP 7.1 R2    | X | - | - |           |
|        | AUXILIARY FEEDWATER NOZZLE TO | C2.21 | UTOW  | STP-UT49 R1,C0 | X | - | - |           |
|        | UPPER SHCLL SECTION C         |       | UT45  | STP-UT15 R0,C0 | X | - | - |           |
|        |                               |       | UT45T | ICN 1          | X | - | - |           |
|        |                               |       | UT60  |                | X | - | - | **CS-54** |
|        |                               |       | UT60T |                | X | - | - |           |

INTEGRAL ATTACHMENTS (FIG NO B-SG-1)

|        |            |       |    |             |   |   |   |  |
|--------|------------|-------|----|-------------|---|---|---|--|
| 300650 | SG-2A-TR11 | C-C   | RT | NDEP 6.2 R3 | X | - | - |  |
|        | TRUNNION A | C3.10 |    |             |   |   |   |  |

DATE: 02/06/92  
 REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
 INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RED2  
 FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
 CLASS 2 COMPLETED COMPONENTS

PAGE: 17

FEEDWATER SYSTEM

| SUMMARY EXAMINATION AREA                 |                     | ASME    | SEC. X1 |  | CATGY EXAM  |  | PROCEDURE | N | D | REMARKS  |                       |
|--|---------------------|---------|---------|--|-------------|--|-----------|---|---|----------|-----------------------|
| NUMBER                                   | IDENTIFICATION      | ITEM NO | METHOD  |  |             |  |           | O | G | E        | H                     |
|  |                     |         |         |  |             |  |           | E | O | E        | H                     |
|  |                     |         |         |  |             |  |           | C | M | R        | **CALIBRATION BLOCK** |
| *****                                    |                     |         |         |  |             |  |           |   |   |          |                       |
| <u>1B-FW-2012-GA2 (FIG NO B-FW-1, 2)</u> |                     |         |         |  |             |  |           |   |   |          |                       |
| 500080                                   | 5                   | C-F-2   | MT      |  | NDEP 7.1 R2 |  |           | X | - | -        |                       |
|  | PENETRATION TO PIPE | C5.51   | UT45    |  | UT1-002 R0  |  |           | X | - | -        |                       |
|  |                     |         |         |  |             |  |           |   |   | **CS-3** |                       |
| <u>1B-FW-2032-AA2 (FIG NO B-FW-7)</u>    |                     |         |         |  |             |  |           |   |   |          |                       |
| 505340                                   | 1                   | C-F-2   | MT      |  | NDEP 7.1 R2 |  |           | X | - | -        |                       |
|  | LBOW TO PIPE        | C5.51   | UT45    |  | UT1-002 R0  |  |           | X | - | -        |                       |
|  |                     |         |         |  |             |  |           |   |   | **CS-4** |                       |
| 505360                                   | 2                   | C-F-2   | MT      |  | NDEP 7.1 R2 |  |           | X | - | -        |                       |
|  | PIPE TO PIPE        | C5.51   | UT45    |  | UT1-002 R0  |  |           | X | - | -        |                       |
|  |                     |         |         |  |             |  |           |   |   | **CS-4** |                       |
| 505380                                   | 3                   | C-F-2   | MT      |  | NDEP 7.1 R2 |  |           | X | - | -        |                       |
|  | PIPE TO PIPE        | C5.51   | UT45    |  | UT1-002 R0  |  |           | X | - | -        |                       |
|  |                     |         |         |  |             |  |           |   |   | **CS-4** |                       |
| 505390                                   | 4                   | C-F-2   | MT      |  | NDEP 7.1 R2 |  |           | X | - | -        |                       |
|  | PIPE TO PIPE        | C5.51   | UT45    |  | UT1-002 R0  |  |           | - | X | -        |                       |
|  |                     |         |         |  |             |  |           |   |   | **CS-4** |                       |
| 505400                                   | 5                   | C-F-2   | MT      |  | NDEP 7.1 R2 |  |           | X | - | -        |                       |
|  | PIPE TO VALVE       | C5.51   | UT45    |  | UT1-002 R0  |  |           | - | X | -        |                       |
|  |                     |         |         |  |             |  |           |   |   | **CS-4** |                       |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 18

MAIN STEAM SYSTEM

| SUMMARY EXAMINATION AREA                 |                   | ASME    |        |             | N | O |   |  |
|--|-------------------|---------|--------|-------------|---|---|---|--|
|  |                   | SEC. XI |        |             | O | G | I |  |
|  |                   | CATGY   | EXAM   |             | R | E | H |  |
| NUMBER                                   | IDENTIFICATION    | ITEM NO | METHOD | PROCEDURE   | E | O | E | REMARKS  |
|  |                   |         |        |             | C | M | R | **CALIBRATION BLOCK**  |
| -----                                    |                   |         |        |             |   |   |   |  |
| <u>30-MS-2001-GA2 (FIG NO B-MS-1, 2)</u> |                   |         |        |             |   |   |   |  |
| 550000                                   | 1                 | C-F-2   | MT     | NDEP 7.1 R2 | X | - | - |  |
|  | NOZZLE TO REDUCER | C5.51   | UT45   | UT1-002 R0  | X | - | - |  |
| **CS-74**                                |                   |         |        |             |   |   |   |  |
| 550020                                   | 1LD               | C-F-2   | MT     | NDEP 7.1 R2 | X | - | - | 91 - EXAMINED 2.5T AT THE INTERSECTING   |
|  | LONGITUDINAL WELD | C5.52   | UT45   | UT1-002 R0  | X | - | - | CIRC. WELD.  |
| **CS-74**                                |                   |         |        |             |   |   |   |  |
| 551780                                   | 25LD              | C-F-2   | MT     | NDEP 7.1 R2 | X | - | - | 91 - AUGMENTED ISI - BEZ.  |
|  | LONGITUDINAL WELD | C5.52   | UT45   | UT1-002 R0  | X | - | - | EXAMINED THAT PORTION OF LONGITUDINAL<br>WELD MADE ACCESSIBLE BY REMOVAL OF<br>HANGER STRAP HL5014 TO COMPLETE<br>EXAMINATION OF THIS WELD FROM 2RE01. |
| **CS-35**                                |                   |         |        |             |   |   |   |  |
| 551800                                   | 28LU              | C-F-2   | MT     | NDEP 7.1 R2 | X | - | - | 91 - AUGMENTED ISI - BEZ.  |
|  | LONGITUDINAL WELD | C5.52   | UT45   | UT1-002 R0  | X | - | - | EXAMINED THAT PORTION OF LONGITUDINAL<br>WELD MADE ACCESSIBLE BY REMOVAL OF<br>HANGER STRAP HL5013 TO COMPLETE<br>EXAMINATION OF THIS WELD FROM 2RE01. |
| **CS-35**                                |                   |         |        |             |   |   |   |  |
| <u>16-MS-2001-GA2 (FIG NO B-MS-2)</u>    |                   |         |        |             |   |   |   |  |
| 559530                                   | 2                 | C-F-2   | MT     | NDEP 7.1 R2 | X | - | - | 91 - AUGMENTED ISI - BEZ.  |
|  | PIPE TO PIPE      | C5.51   | UT45   | UT1-002 R0  | X | - | - | EXAMINED AFTER REMOVAL OF I/C PIPE CLAMP<br>SUPPORT FOR LSH 7900.  |
| **CS-75**                                |                   |         |        |             |   |   |   |  |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RED2  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 19

SAFETY INJECTION SYSTEM

| SUMMARY EXAMINATION AREA       |                           | ASME           |                     |                           | M                       | O |   |  |
|--------------------------------|---------------------------|----------------|---------------------|---------------------------|-------------------------|---|---|--|
|                                |                           | SEC. XI        |                     |                           | O                       | G | T |  |
|                                |                           | CATGY          | EXAM                |                           |                         | R | E | H  |
|                                |                           | ITEM NO        | METHOD              | PROCEDURE                 | E                       | O | E | REMARKS  |
| NUMBER                         | IDENTIFICATION            |                |                     |                           | C                       | M | R | **CALIBRATION BLOCK**  |
| -----                          |                           |                |                     |                           |                         |   |   |  |
| 16-SI-2101-UB2 (FIG NO B-SI-3) |                           |                |                     |                           |                         |   |   |  |
| 702960                         | 1LU<br>LONGITUDINAL WELD  | C-F-1<br>C5.12 | PT<br>UT45<br>UT45T | NDEP 6.2 R3<br>UT1-012 R0 | X - -<br>- X -<br>X - - |   |   | 91 - EXAMINED 2.5T AT THE INTERSECTING<br>CIRC. WELD.<br><br>**SS-30** |
| 703000                         | 1<br>REDUCER TO PIPE      | C-F-1<br>C5.11 | PT<br>UT45<br>UT45T | NDEP 6.2 R3<br>UT1-012 R0 | X - -<br>- X -<br>- X - |   |   | <br><br><br>**SS-30**  |
| 703020                         | 1LD<br>LONGITUDINAL WELD  | C-F-1<br>C5.12 | PT<br>UT45<br>UT45T | NDEP 6.2 R3<br>UT1-012 R0 | X - -<br>X - -<br>X - - |   |   | 91 - EXAMINED 2.5T AT THE INTERSECTING<br>CIRC. WELD.<br><br>**SS-30** |
| 703120                         | 4LU1<br>LONGITUDINAL WELD | C-F-1<br>C5.12 | PT<br>UT45<br>UT45T | NDEP 6.2 R3<br>UT1-012 R0 | X - -<br>X - -<br>X - - |   |   | 91 - EXAMINED 2.5T AT THE INTERSECTING<br>CIRC. WELD.<br><br>**SS-30** |
| 703140                         | 4LU0<br>LONGITUDINAL WELD | C-F-1<br>C5.12 | PT<br>UT45<br>UT45T | NDEP 6.2 R3<br>UT1-012 R0 | X - -<br>X - -<br>X - - |   |   | 91 - EXAMINED 2.5T AT THE INTERSECTING<br>CIRC. WELD.<br><br>**SS-30** |
| 703160                         | 4<br>ELBOW TO PIPE        | C-F-1<br>C5.11 | PT<br>UT45<br>UT45T | NDEP 6.2 R3<br>UT1-012 R0 | X - -<br>- X -<br>X - - |   |   | <br><br><br>**SS-30**  |
| 703180                         | 4LD<br>LONGITUDINAL WELD  | C-F-1<br>C5.12 | PT<br>UT45<br>UT45T | NDEP 6.2 R3<br>UT1-012 R0 | X - -<br>X - -<br>X - - |   |   | 91 - EXAMINED 2.5T AT THE INTERSECTING<br>CIRC. WELD.<br><br>**SS-30** |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 20

SAFETY INJECTION SYSTEM

|                                       |                           |         |        |             | N | O |   |   |
|---------------------------------------|---------------------------|---------|--------|-------------|---|---|---|---|
|                                       |                           |         |        |             | O | G | T |   |
|                                       |                           |         |        |             | R | E | H |   |
| SUMMARY EXAMINATION AREA              |                           |         |        |             | E | O | E | REMARKS                                 |
| NUMBER                                | IDENTIFICATION            | ITEM NO | METHOD | PROCEDURE   | C | M | R | **CALIBRATION BLOCK**                   |
| -----                                 |                           |         |        |             |   |   |   |   |
| <u>16-SI-2101-UB2 (FIG NO B-SI-3)</u> |                           |         |        |             |   |   |   |   |
| 703240                                | 6                         | C-F-1   | PT     | NDEP 6.2 R3 | X | - | - |   |
|                                       | VALVE TO PIPE             | C5.11   | UT45   | UT1-012 R0  | - | X | - |   |
|                                       |                           |         | UT45T  |             | X | - | - | **SS-30**                               |
| 703260                                | 6LD                       | C-F-1   | PT     | NDEP 6.2 R3 | X | - | - | 91 - EXAMINED 2.5T AT THE INTERSECTING  |
|                                       | LONGITUDINAL WELD         | C5.12   | UT45   | UT1-012 R0  | X | - | - | CIRC. WELD.                             |
|                                       |                           |         | UT45T  |             | X | - | - | **SS-30**                               |
| <u>12-SI-2101-UB2 (FIG NO B-SI-3)</u> |                           |         |        |             |   |   |   |   |
| 709220                                | 1                         | C-F-1   | PT     | NDEP 6.2 R3 | X | - | - |   |
|                                       | BRANCH CONNECTION TO PIPE | C5.11   | UT45   | UT1-012 R0  | X | - | - |   |
|                                       |                           |         | UT45T  |             | X | - | - | **SS-12**                               |
| 709240                                | 1LD                       | C-F-1   | PT     | NDEP 6.2 R3 | X | - | - | 91 - EXAMINED 2.5T AT THE INTERSECTING  |
|                                       | LONGITUDINAL WELD         | C5.12   | UT45   | UT1-012 R0  | X | - | - | CIRC. WELD.                             |
|                                       |                           |         | UT45T  |             | X | - | - | **SS-12**                               |
| <u>10-SI-2101-UB2 (FIG NO B-SI-3)</u> |                           |         |        |             |   |   |   |   |
| 716700                                | 2LU                       | C-F-1   | PT     | NDEP 6.2 R3 | X | - | - | 91 - AUGMENTED ISI - IEB 79-17.         |
|                                       | LONGITUDINAL WELD         | --      | UT0L   | UT1-004 R0  | X | - | - | EXAMINED 2.5T AT THE INTERSECTING CIRC. |
|                                       |                           |         | UT45   | UT1-012 R0  | X | - | - | WELD.                                   |
|                                       |                           |         | UT45T  |             | X | - | - | **SS-B7**                               |
| 716720                                | 2                         | C-F-1   | PT     | NDEP 6.2 R3 | X | - | - | 91 - AUGMENTED ISI - IEB 79-17.         |
|                                       | PIPE TO ELBOW             | --      | UT0L   | UT1-004 R0  | X | - | - |   |
|                                       |                           |         | UT45   | UT1-012 R0  | X | - | - |   |
|                                       |                           |         | UT45T  |             | X | - | - | **SS-B7**                               |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RE07  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 21

SAFETY INJECTION SYSTEM

|                                       |                   |         |        |             | N                                       | D |   |
|---------------------------------------|-------------------|---------|--------|-------------|---|---|---|
|                                       |                   |         |        |             | O                                       | G | I |
|                                       |                   |         |        |             | R                                       | E | H |
| SUMMARY EXAMINATION AREA              |                   |         |        |             | E                                       | O | E |
| NUMBER                                | IDENTIFICATION    | ITEM NO | METHOD | PROCEDURE   | C                                       | M | R |
|                                       |                   |         |        |             | REMARKS                                 |   |   |
|                                       |                   |         |        |             | **CALIBRATION BLOCK**                   |   |   |
| *****                                 |                   |         |        |             |   |   |   |
| <u>10-SI-2101-UB2 (FIG NO B-SI-3)</u> |                   |         |        |             |   |   |   |
| 716740                                | 2LD               | C-F-1   | PT     | NDEP 6.2 R3 | X                                       | - | - |
|                                       | LONGITUDINAL WELD | --      | UTOL   | UT1-004 R0  | X                                       | - | - |
|                                       |                   |         | UT45   | UT1-012 R0  | X                                       | - | - |
|                                       |                   |         | UT45T  |             | X                                       | - | - |
|                                       |                   |         |        |             | 91 - AUGMENTED ISI - ICB 79-17.         |   |   |
|                                       |                   |         |        |             | EXAMINED 2.5T AT THE INTERSECTING CIRC. |   |   |
|                                       |                   |         |        |             | WELD.                                   |   |   |
|                                       |                   |         |        |             | **SS-B7**                               |   |   |
|                                       |                   |         |        |             |   |   |   |
| <u>6-SI-2106-DB2 (FIG NO B-SI-12)</u> |                   |         |        |             |   |   |   |
| 732040                                | 3                 | C-F-1   | PT     | NDEP 6.2 R3 | X                                       | - | - |
|                                       | FLANGE TO ELBOW   | C5.11   | UT45   | UT1-005 R0  | -                                       | X | - |
|                                       |                   |         | UT45T  |             | X                                       | - | - |
|                                       |                   |         |        |             | **SS-23**                               |   |   |
| 732060                                | 4                 | C-F-1   | PT     | NDEP 6.2 R3 | X                                       | - | - |
|                                       | ELBOW TO PIPE     | C5.11   | UT45   | UT1-005 R0  | -                                       | X | - |
|                                       |                   |         | UT45T  |             | X                                       | - | - |
|                                       |                   |         |        |             | **SS-23**                               |   |   |
| 732080                                | 6                 | C-F-1   | PT     | NDEP 6.2 R3 | X                                       | - | - |
|                                       | PIPE TO ELBOW     | C5.11   | UT45   | UT1-005 R0  | -                                       | X | - |
|                                       |                   |         | UT45T  |             | X                                       | - | - |
|                                       |                   |         |        |             | **SS-23**                               |   |   |
| 732100                                | 7                 | C-F-1   | PT     | NDEP 6.2 R3 | X                                       | - | - |
|                                       | ELBOW TO PIPE     | C5.11   | UT45   | UT1-005 R0  | -                                       | X | - |
|                                       |                   |         | UT45T  |             | X                                       | - | - |
|                                       |                   |         |        |             | **SS-23**                               |   |   |
|                                       |                   |         |        |             |   |   |   |
| <u>6-SI-2107-DB2 (FIG NO B-SI-14)</u> |                   |         |        |             |   |   |   |
| 733820                                | 1                 | C-F-1   | PT     | NDEP 6.2 R3 | X                                       | - | - |
|                                       | VALVE TO PIPE     | C5.11   | UTOW   | UT1-004 R0  | -                                       | - | X |
|                                       |                   |         | UT45   | UT1-001 R1  | X                                       | - | - |
|                                       |                   |         | UT45T  |             | X                                       | - | - |
|                                       |                   |         | UT60   | UT1-005 R0  | -                                       | X | - |
|                                       |                   |         |        |             | 91 - USED UT60 REFRACTED SHEAR FOR      |   |   |
|                                       |                   |         |        |             | ADDITIONAL COVERAGE. ONE (1) UTO CODE   |   |   |
|                                       |                   |         |        |             | ALLOWABLE INDICATION. LIMITED UT DUE    |   |   |
|                                       |                   |         |        |             | TO VALVE CONFIGURATION.                 |   |   |
|                                       |                   |         |        |             | **SS-9**                                |   |   |



DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 22

SAFETY INJECTION SYSTEM

| SUMMARY EXAMINATION AREA              |                | ASME  | SEC. XI | CATGY       | EXAM | ITEM N | METHOD | PROCEDURE | N | O | REMARKS   |
|---------------------------------------|----------------|-------|---------|-------------|------|--------|--------|-----------|---|---|---|
| NUMBER                                | IDENTIFICATION |       |         |             |      |        |        |           | C | H | R   |
| *****                                 |                |       |         |             |      |        |        |           |   |   |   |
| <u>6-SI-2107-BB2 (FIG NO B-SI-14)</u> |                |       |         |             |      |        |        |           |   |   |   |
| 733840                                | 2              | C-F-1 | PT      | NDEP 6.2 R3 |      |        |        |           | X | - | -   |
|                                       | PIPE TO ELBOW  | C5.11 | UT45    | UT1-001 R1  |      |        |        |           | - | X | -   |
|                                       |                |       | UT45T   |             |      |        |        |           | X | - | -   |
|                                       |                |       |         |             |      |        |        |           |   |   | **SS-Q**  |
| 733860                                | 3              | C-F-1 | PT      | NDEP 6.2 R3 |      |        |        |           | X | - | -   |
|                                       | ELBOW TO PIPE  | C5.11 | UT45    | UT1-001 R1  |      |        |        |           | - | X | -   |
|                                       |                |       | UT45T   |             |      |        |        |           | X | - | -   |
|                                       |                |       |         |             |      |        |        |           |   |   | **SS-Q**  |
| <u>6-SI-2109-DB2 (FIG NO B-SI-14)</u> |                |       |         |             |      |        |        |           |   |   |   |
| 734620                                | 9              | C-F-1 | PT      | NDEP 6.2 R3 |      |        |        |           | X | - | -   |
|                                       | PIPE TO ELBOW  | C5.11 | UT45    | UT1-001 R1  |      |        |        |           | - | X | -   |
|                                       |                |       | UT45T   |             |      |        |        |           | X | - | -   |
|                                       |                |       |         |             |      |        |        |           |   |   | **SS-Q**  |
| 734640                                | 10             | C-F-1 | PT      | NDEP 6.2 R3 |      |        |        |           | X | - | -   |
|                                       | ELBOW TO PIPE  | C5.11 | UT45    | UT1-001 R1  |      |        |        |           | - | X | -   |
|                                       |                |       | UT45T   |             |      |        |        |           | X | - | -   |
|                                       |                |       |         |             |      |        |        |           |   |   | **SS-Q**  |
| 734660                                | 11             | C-F-1 | PT      | NDEP 6.2 R3 |      |        |        |           | X | - | -   |
|                                       | PIPE TO VALVE  | C5.11 | UT0W    | UT1-004 R0  |      |        |        |           | - | - | X   |
|                                       |                |       | UT45    | UT1-001 R1  |      |        |        |           | - | X | -   |
|                                       |                |       | UT45T   |             |      |        |        |           | X | - | -   |
|                                       |                |       | UT60    | UT1-005 R0  |      |        |        |           | - | X | -   |
|                                       |                |       |         |             |      |        |        |           |   |   | 91 - USED UT60 REFRACTED SHEAR FOR<br>ADDITIONAL COVERAGE. SIX (6) UTO CODE<br>ALLOWABLE INDICATIONS. LIMITED UT DUE<br>TO VALVE CONFIGURATION.<br>**SS-Q** |
| <u>6-SI-2110-BB2 (FIG NO B-SI-14)</u> |                |       |         |             |      |        |        |           |   |   |   |
| 735160                                | 1              | C-F-1 | PT      | NDEP 6.2 R3 |      |        |        |           | X | - | -   |
|                                       | VALVE TO PIPE  | C5.11 | UT0W    | UT1-004 R0  |      |        |        |           | - | - | X   |
|                                       |                |       | UT45    | UT1-001 R1  |      |        |        |           | - | X | -   |
|                                       |                |       | UT45T   |             |      |        |        |           | X | - | -   |
|                                       |                |       | UT60    | UT1-005 R0  |      |        |        |           | - | X | -   |
|                                       |                |       |         |             |      |        |        |           |   |   | **SS-B**  |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RED2  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 23

SAFETY INJECTION SYSTEM

| SUMMARY EXAMINATION AREA |                | ASME    |        |           | M | O |                       |
|--------------------------|----------------|---------|--------|-----------|---|---|-----------------------|
| NUMBER                   | IDENTIFICATION | SEC. XI | CATGY  | EXAM      |   | D | G T                   |
|                          |                | ITEM NO | METHOD | PROCEDURE |   | R | E H                   |
|                          |                |         |        |           |   | E | O E                   |
|                          |                |         |        |           |   | C | M R                   |
|                          |                |         |        |           |   |   | REMARKS               |
|                          |                |         |        |           |   |   | **CALIBRATION BLOCK** |

2-SI-2106-DB2 (FIG NO B-SI-20)

|        |               |       |    |             |   |   |   |
|--------|---------------|-------|----|-------------|---|---|---|
| 746010 | 2             | C-F-1 | PT | NDEP 6.2 R3 | X | - | - |
|        | PIPE TO ELBOW | C5.30 |    |             |   |   |   |

2-SI-2139-DB2 (FIG NO B-SI-21)

|        |                           |       |    |             |   |   |   |
|--------|---------------------------|-------|----|-------------|---|---|---|
| 746200 | 1                         | C-F-1 | PT | NDEP 6.2 R3 | X | - | - |
|        | BRANCH CONNECTION TO PIPE | C5.30 |    |             |   |   |   |

DATE: 02/06/92

REVISION: 0

SOUTH TEXAS PROJECT UNIT 2

PAGE: 24

INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RED2

FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)

CLASS 2 COMPLETED COMPONENTS

CONTAINMENT SPRAY PUMPS

| SUMMARY EXAMINATION AREA          |                          | ASME       |        | N O         |       | REMARKS |  |
|-----------------------------------|--------------------------|------------|--------|-------------|-------|---------|--|
| NUMBER                            | IDENTIFICATION           | SEC. XI    |        | O G T       |       |         |  |
|                                   |                          | CATGY EXAM |        | R E H       |       |         |  |
|                                   |                          | ITEM NO    | METHOD | PROCEDURE   | E O E |         |  |
|                                   |                          |            |        |             | C M R |         |  |
| *****                             |                          |            |        |             |       |         |  |
| <u>PUMP 2A (FIG. NO B-CSP-12)</u> |                          |            |        |             |       |         |  |
| 750125                            | CIAPCS-2A-PCW2           | C-G        | PT     | NDEP 6.2 R3 | X - - |         |  |
|                                   | UPPER CASE TO LOWER CASE | C6.10      |        |             |       |         |  |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM ZRE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 25

### RESIDUAL HEAT REMOVAL PUMPS

|                          |  |  |  | N                     | O         |
|--------------------------|--|--|--|-----------------------|-----------|
|                          |  |  |  | O                     | G         |
|                          |  |  |  | R                     | E         |
|                          |  |  |  | E                     | O         |
|                          |  |  |  | C                     | M         |
| SUMMARY EXAMINATION AREA |  |  |  | EXAM                  | REMARKS   |
| NUMBER IDENTIFICATION    |  |  |  | ITEM NO               | PROCEDURE |
|                          |  |  |  | **CALIBRATION BLOCK** |           |

PUMP 2A (FIG. NO. B-RHRP-1)

|        |                       |       |    |             |   |
|--------|-----------------------|-------|----|-------------|---|
| 750620 | RHARHS-2A-PCW4        | C-G   | PT | NDEP 6.2 R3 | X |
|        | PUMP CASING TO NOZZLE | C6.10 |    |             |   |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 26

HIGH HEAD SAFETY INJECTION PUMPS

| SUMMARY EXAMINATION AREA |                | ASME    |        |           | N                     | D |   |
|--------------------------|----------------|---------|--------|-----------|-----------------------|---|---|
|                          |                | SEC. XI |        |           | O                     | G | T |
|                          |                | CATGY   | EXAM   |           | R                     | E | H |
| NUMBER                   | IDENTIFICATION | ITEM NO | METHOD | PROCEDURE | E                     | O | E |
|                          |                |         |        |           | C                     | M | R |
|                          |                |         |        |           | REMARKS               |   |   |
|                          |                |         |        |           | **CALIBRATION BLOCK** |   |   |

PUMP 2A (FIG NO B-HSIP-1)

|        |                          |       |    |             |   |  |  |
|--------|--------------------------|-------|----|-------------|---|--|--|
| 751025 | SIAPHH-2A-PCW2           | C-G   | PT | NDEP 6.2 R3 | X |  |  |
|        | UPPER CASE TO LOWER CASE | C6.10 |    |             |   |  |  |

DATE: 02/06/92

REVISION: 0

SOUTH TEXAS PROJECT UNIT 2

PAGE: 27

INSERVICE INSPECTION SUMMARY - WELDS PROGRAM 2RE02

FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)

CLASS 2 COMPLETED COMPONENTS

LOW HEAD SAFETY INJECTION PUMPS

| SUMMARY EXAMINATION AREA |                | ASME  |       | N       |        | D         |       | G     |       | T                     |       | R     |       | E     |       | M     |       | E     |       | O     |       | E     |       | REMARKS |       |
|--------------------------|----------------|-------|-------|---------|--------|-----------|-------|-------|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|-------|
| NUMBER                   | IDENTIFICATION | CATGY | EXAM  | ITEM NO | METHOD | PROCEDURE | C     | M     | R     | **CALIBRATION BLOCK** |       |       |       |       |       |       |       |       |       |       |       |       |       |         |       |
| *****                    | *****          | ***** | ***** | *****   | *****  | *****     | ***** | ***** | ***** | *****                 | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | ***** | *****   | ***** |

PUMP 2A (FIG NO B-LSIP-1)

|        |                          |       |    |             |   |   |   |
|--------|--------------------------|-------|----|-------------|---|---|---|
| 751325 | SIAPLH-2A-PCW2           | C-G   | P1 | NDEP 6.2 R3 | X | - | - |
|        | UPPER CASE TO LOWER CASE | C6.10 |    |             |   |   |   |

APPENDIX 2-B

PERSONNEL/EQUIPMENT/MATERIALS

# APPENDIX 2-B

## PERSONNEL QUALIFICATIONS

| <u>Name</u>        | <u>Company</u> | <u>UT</u> | <u>MT</u> | <u>PT</u> | <u>VT</u> |
|--------------------|----------------|-----------|-----------|-----------|-----------|
| Roberds, B. A.     | SwRI           | II *      | **        | **        | **        |
| Garcia, D. G.      | SSI            | II *      | **        | **        | **        |
| Carson, J. P.      | SSI            | II *      | **        | **        | **        |
| Clark, A. D.       | SSI            | I         | **        | **        | **        |
| Long, J. W.        | SSI            | I         | **        | **        | **        |
| Porterfield, C. E. | SSI            | I         | **        | **        | **        |
| Pennanen, A. R.    | NES            | III*      | III       | III       | II        |
| Breyer, L. H.      | HL&P           | **        | **        | **        | II        |
| Claxton, O. A.     | HL&P           | **        | **        | **        | I         |
| Halley, J. F.      | HL&P           | II *      | II        | II        | II        |
| Herbelin, F. J.    | HL&P           | **        | **        | **        | II        |
| Hubbard, S. K.     | HL&P           | III       | III       | III       | III       |
| Krueger, R. P.     | HL&P           | **        | **        | **        | II        |
| Portell, V. P.     | HL&P           | **        | **        | **        | II        |
| Silva, P.          | HL&P           | **        | II        | II        | II        |
| Spiess, L. D.      | HL&P           | II *      | II        | II        | II        |
| Stuhler, D. A.     | HL&P           | II *      | II        | II        | II        |
| Suhler, C. D.      | HL&P           | II *      | 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

\*\* - This NDE method not performed by these personnel



## APPENDIX 2-B

### SwRI MATERIAL AND EQUIPMENT

#### MATERIAL

##### Type

Berol Prismacolor Black Pencils #935, Log #2989

Berol Prismacolor White Pencils #938, Log #3044

Sonotrace 40, Batch #9091, Log #3023

Sonotrace 40, Batch #9094, Log #3048

#### EQUIPMENT

##### Brand

##### Serial N

|                             |     |
|-----------------------------|-----|
| Pyrometer, Amprobe, Fastemp | 159 |
| Pyrometer, Amprobe, Fastemp | 178 |
| Pyrometer, Amprobe, Fastemp | 181 |
| Pyrometer, Amprobe, Fastemp | 183 |
| Pyrometer, Amprobe, Fastemp | 185 |
| Pyrometer, Amprobe, Fastemp | 187 |

## APPENDIX 2-B

### SwRI MATERIAL AND EQUIPMENT, cont'd

#### EQUIPMENT

| <u>Brand</u>   | <u>Serial No.</u> |
|----------------|-------------------|
| Sonic FTS MK I | 01105E            |
| Sonic FTS MK I | 01112E            |
| Sonic FTS MK I | 01113E            |
| Sonic FTS MK I | 01114E            |
| Sonic FTS MK I | 01116E            |
| Sonic FTS MK I | 04325E            |
| Sonic FTS MK I | 07011E            |
| Sonic FTS MK I | 780415            |

## APPENDIX 2-B

### SwRI MATERIAL AND EQUIPMENT, cont'd

#### TRANSDUCERS

| <u>Brand</u> | <u>Serial No.</u> |
|--------------|-------------------|
| Aerotech     | B09696            |
| Aerotech     | B14232            |
| Aerotech     | B24665            |
| Aerotech     | E15545            |
| Aerotech     | E15546            |
| Aerotech     | E15548            |
| Aerotech     | E15546            |
| Aerotech     | F22813            |
| Aerotech     | H20100            |
| Aerotech     | H24832            |
| Aerotech     | M01907            |
| Aerotech     | O13723            |
| Aerotech     | O15840            |
| SwRI         | 507               |
| SwRI         | 636               |
| SwRI         | 1264              |
| SwRI         | 1814              |
| SwRI         | 2929              |
| SwRI         | 5438              |
| SwRI         | 3676              |
| SwRI         | 3679              |
| SwRI         | 3835              |
| SwRI         | 11879             |

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 88D020  
PT Cleaner SKC-NF/ZC-7B, Magnaflux, Batch 88F079  
PT Cleaner SKC-NF/ZC-7B, Magnaflux, Batch 91F01P  
PT Penetrant SKL-HF/S, Magnaflux, Batch 84L058  
PT Penetrant SKL-HF/S, Magnaflux, Batch 87C037  
PT Penetrant SKL-HF/S, Magnaflux, Batch 89K01K  
PT Developer SKD-NF/ZP-9B, Magnaflux, Batch 88E035  
PT Developer SKD-NF/ZP-9B, Magnaflux, Batch 89H055

MT Powder, Gray No. 1

Sonotrace 40, Batch No. 9091

EQUIPMENT

Brand

Serial No.

|              |              |
|--------------|--------------|
| Thermometer  | 100-00520-01 |
| Thermometer  | 100-00520-48 |
| Thermometer  | 100-00520-55 |
| Thermometer  | 100-00520-61 |
| Thermometer  | 100-00520-66 |
| Thermometer  | 100-00520-68 |
| Thermometer  | 100-00520-69 |
| Thermometer  | 100-00520-74 |
| Thermometer  | 100-00520-76 |
| Thermometer  | 100-00520-79 |
|              |              |
| Thermocouple | 100-00534-17 |
| Thermocouple | 100-00534-18 |
| Thermocouple | 100-00534-20 |
| Thermocouple | 100-00534-33 |
| Thermocouple | 100-00534-39 |
| Thermocouple | 100-00537-02 |
| Thermocouple | 100-00580-13 |
| Thermocouple | 100-00580-22 |
| Thermocouple | 100-00580-27 |

APPENDIX 2-B  
HL&P MATERIAL AND EQUIPMENT, cont'd

EQUIPMENT cont'd

|                             |               |
|-----------------------------|---------------|
| MT Yoke, Magnaflux, Y-6     | Y6-03         |
| MT Yoke, Magnaflux, Y-6     | Y6-04         |
| Krautkramer Branson, USD-10 | 100-01303-01  |
| Krautkramer Branson, USK-7D | 100-01328-001 |
| Krautkramer Branson, USK-7D | 100-01328-003 |

TRANSDUCERS

| <u>Brand</u> | <u>Serial No.</u> |
|--------------|-------------------|
| Aerotech     | 18282             |
| Aerotech     | B07336            |
| Aerotech     | B07339            |
| Aerotech     | F14717            |
| Aerotech     | H28917            |
| Aerotech     | JD2881            |
| Aerotech     | L09901            |
| Aerotech     | L16908            |
| Aerotech     | L17920            |
| Aerotech     | L18549            |
| SwRI         | 520               |
| SwRI         | 3387              |
| SwRI         | 3389              |

APPENDIX 2-C

PROCEDURES

## APPENDIX 2-C

### SwRI OPERATING PROCEDURES

| <u>Procedure No.</u>       | <u>Title</u>   |
|----------------------------|--|
| SwRI-NDE3/0/0<br>ICN No. 2 | Recording Indications During Ultrasonic Examinations |
| SwRI-NDE5/0/1              | Ultrasonic Linearity Measurements                    |
| SwRI-NDE6/0/0              | Use of Customer Notification Forms                   |
| SwRI-NDE7/0/0              | Weld Joint Identification Marking                    |

## APPENDIX 2-C

### SwRI NDT PROCEDURES

| Procedure No.                    | Title  |
|----------------------------------|--|
| STP-UT11/0/0<br>ICN No. 1        | Manual Ultrasonic Examination of Vessel-To-Nozzle Inner Radius Sections                              |
| STP-UT15/0/0<br>ICN Nos. 1 & 2   | Manual Ultrasonic Examination of Pressure Vessel Welds (Greater than 2 to 12 Inches in Thickness)    |
| STP-UT31/0/0<br>ICN Nos. 1 & 2   | Manual Ultrasonic Examination of Austenitic Pressure Piping Welds                                    |
| STP-UT49/1/0                     | Manual Ultrasonic Examination Using Longitudinal Wave Straight-Beam Techniques                       |
| STP-UT52/0/0<br>ICN No. 1        | Manual Ultrasonic Examination of Similar and Dissimilar Metal Welds in Austenitic Piping Systems     |
| STP-UT53/0/0<br>ICN No. 1        | Manual Ultrasonic Examination of Austenitic Branch Connection Welds from the Branch Connection Taper |
| STP-UT54/0/0<br>ICN Nos. 1,2 & 3 | Manual Ultrasonic Examination of Pressure Piping Welds of High Attenuation Materials                 |
| STP-UT128/0/1                    | Manual Ultrasonic Examination of Austenitic Pressure Piping Welds for Thermal Fatigue Cracking       |



## APPENDIX 2-C

### HL&P PROCEDURES

| <u>Procedure No.</u>      | <u>Title</u>   |
|---------------------------|--|
| NDEP 4.0 Rev. 2           | Ultrasonic Examination   |
| NDEP 6.2 Rev. 3<br>Rev. 4 | Color Contrast Solvent Removable Liquid Penetrant Examination of ASME XI PSI/ISI                         |
| NDEP 7.1 Rev. 2           | Dry Powder Magnetic Particle Examination for ASME XI PSI/ISI   |
| NDEP 9.3 Rev. 1           | ASME XI Examination for VT-1 and VT-3  |
| UTI-001 Rev. 1            | Manual Ultrasonic Examination of Austenitic Pressure Piping Welds Using Refracted Longitudinal Technique |
| UTI-002 Rev. 1            | Manual Ultrasonic Examination of Ferritic Pressure Piping Welds  |
| UTI-004 Rev. 0            | Manual Ultrasonic Examination Using Longitudinal Wave Straight-Beam Technique                            |
| UTI-005 Rev. 1            | Manual Ultrasonic Examination of Austenitic Pressure Piping Welds  |
| UTI-006 Rev. 0            | Manual Ultrasonic Indication Sizing  |
| UTI-007 Rev. 0            | Recording Indications During Ultrasonic Examinations   |
| UTI-008 Rev. 0            | Weld Joint Identification  |
| UTI-012 Rev. 0            | Manual Ultrasonic Examination of Thin Wall Piping Welds  |
| UTI-013 Rev. 0            | Manual Ultrasonic Examination of Reactor Pressure Vessel Flange-to-Upper Shell Weld                      |

APPENDIX 2-D

ISI EXAMINATION LIMITATIONS

## APPENDIX 2-D

### ISI EXAMINATION LIMITATIONS

#### Table of Contents

|   | <u>Page</u> |
|---|-------------|
| STPEGS-2 Summary of Inservice Examination Limitation  | 2-48        |
| <u>Class 1 Components</u>                             |             |
| ASME Category B-B<br>Steam Generator                  | 2-51        |
| ASME Category B-D<br>Pressurizer<br>Steam Generator   | 2-52        |
| ASME Category B-F<br>Piping<br>Reactor Coolant System | 2-53        |
| ASME Category B-J<br>Piping<br>Reactor Coolant System | 2-54        |
| <u>Class 2 Components</u>                             |             |
| ASME Category C-F-1<br>Safety Injection               | 2-55        |

## SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 2 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 2. 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, 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:

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

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

Examples:

- (1) none 1 dir 2 dir  
0% 0% 100%

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

- (2) none 1 dir 2 dir  
0% 100% 0%

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

- (3) none 1 dir 2 dir  
50% 50% 0%

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

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

1991 2RE02 ISI

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 2

## ASME CATEGORY B-B

SYSTEM STEAM GENERATOR (CLASS 1)

| CLASS<br>CATGY<br>ITEM NO.<br>EXM RQT | - LINE NO /SUBASSEMBLY<br>- WELD IDENTIFICATION<br>- WELD ID FIGURE<br>- EXAMINATION METHOD | EXAM<br>TYPE | % COVERAGE |            |       |           |       | LIMITATION   |
|---------------------------------------|---|--------------|------------|------------|-------|-----------|-------|--|
|                                       |   |              | NONE       | 1 DIR ONLY | 2 DIR | EFF. COV. | TOTAL |  |
| 1<br>B-B<br>B2.31<br>VOL              | SG-2A   | UT0          | 30         | -          | -     | 70        |       | NO UT FROM THE SUPPORT RING SIDE DUE TO SUPPORT RING CONFIGURATION   |
|                                       | SR-1  | UT45         | 7          | 51         | 42    | 68        |       |  |
|                                       | FIGURE NO. A-SG-1   | UT45T        | 30         | 0          | 70    | 70        |       |  |
|                                       | HEAD-TO-SUPPORT RING  | UT60         | 5          | 71         | 24    | 60        |       |  |
|                                       |   | UT60T        | 30         | 0          | 70    | 70        |       |  |
|                                       | UT  |              |            |            |       |           | 67    |  |
| 1<br>B-B<br>B2.31<br>VOL              | SG-2D   | UT0          | 30         | -          | -     | 70        |       | NO UT FROM THE SUPPORT RING SIDE DUE TO SUPPORT RING CONFIGURATION   |
|                                       | SR-1  | UT45         | 7          | 51         | 42    | 68        |       |  |
|                                       | FIGURE NO. A-SG-2   | UT45T        | 30         | 0          | 70    | 70        |       |  |
|                                       | HEAD-TO-SUPPORT RING  | UT60         | 5          | 71         | 24    | 60        |       |  |
|                                       |   | UT60T        | 30         | 0          | 70    | 70        |       |  |
|                                       | UT  |              |            |            |       |           | 67    |  |
| 1<br>B-B<br>B2.40<br>VOL              | SG-2A   | UT0          | 29         | -          | -     | 71        |       | NO UT FROM THE SUPPORT RING SIDE DUE TO SUPPORT RING CONFIGURATION.<br>LIMITED UT FROM THE TUBE PLATE SIDE DUE TO PROXIMITY OF WELDED PLATES |
|                                       | SR-2  | UT45         | 7          | 51         | 42    | 68        |       |  |
|                                       | FIGURE NO. A-SG-1   | UT45T        | 29         | 0          | 71    | 71        |       |  |
|                                       | SPPT RING-TO-TUBE PLATE   | UT60         | 5          | 71         | 24    | 60        |       |  |
|                                       |   | UT60T        | 29         | 0          | 71    | 71        |       |  |
|                                       | UT  |              |            |            |       |           | 68    |  |
| 1<br>B-B<br>B2.40<br>VOL              | SG-2D   | UT0          | 29         | -          | -     | 71        |       | NO UT FROM THE SUPPORT RING SIDE DUE TO SUPPORT RING CONFIGURATION.<br>LIMITED UT FROM THE TUBE PLATE SIDE DUE TO PROXIMITY OF WELDED PLATES |
|                                       | SR-2  | UT45         | 7          | 51         | 42    | 68        |       |  |
|                                       | FIGURE NO. A-SG-2   | UT45T        | 29         | 0          | 71    | 71        |       |  |
|                                       | SPPT RING-TO-TUBE PLATE   | UT60         | 5          | 71         | 24    | 60        |       |  |
|                                       |   | UT60T        | 29         | 0          | 71    | 71        |       |  |
|                                       | UT  |              |            |            |       |           | 68    |  |

# ASME SECTION XI CODE COVERAGE LIMITATIONS

1991 2RE02 ISI

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 2

## ASME CATEGORY B-D

SYSTEM: PRESSURIZER (CLASS 1)

| CLASS<br>CATOY<br>ITEM NO.<br>EXM RQT | - LINE NO./SUBASSEMBLY<br>- WELD IDENTIFICATION<br>- WELD ID FIGURE<br>- EXAMINATION METHOD | EXAM<br>TYPE | % COVERAGE |               |          |            |       | LIMITATION  |
|---------------------------------------|---|--------------|------------|---------------|----------|------------|-------|---|
|                                       |   |              | NONE       | 1 DIR<br>ONLY | 2<br>DIR | EFF<br>COV | TOTAL |   |
| 1                                     | PRZ-2   | UT0          | 30         | -             | -        | 70         |       | NO UT FROM THE NOZZLE SIDE DUE TO NOZZLE CONFIGURATION. |
| B-D                                   | N1  | UT45         | 8          | 52            | 40       | 66         |       |   |
| B3.110                                | FIGURE NO. A-PRZ-1  | UT45T        | 30         | 0             | 70       | 70         |       |   |
| VOL                                   |   | UT60         | 4          | 88            | 8        | 52         |       |   |
|                                       | SHELL-TO-SURGE NOZZLE   | UT60T        | 30         | 0             | 70       | 70         |       |   |
|                                       | UT  |              |            |               |          |            | 66    |   |

SYSTEM: STEAM GENERATOR (CLASS 1)

| CLASS<br>CATOY<br>ITEM NO.<br>EXM RQT | - LINE NO./SUBASSEMBLY<br>- WELD IDENTIFICATION<br>- WELD ID FIGURE<br>- EXAMINATION METHOD | EXAM<br>TYPE | % COVERAGE |               |          |            |       | LIMITATION   |
|---------------------------------------|---|--------------|------------|---------------|----------|------------|-------|--|
|                                       |   |              | NONE       | 1 DIR<br>ONLY | 2<br>DIR | EFF<br>COV | TOTAL |  |
| 1                                     | SG-2A   | UT0          | 2          | -             | -        | 98         |       | LIMITED UT FROM THE HEAD SIDE DUE TO PROXIMITY OF VIBRATION SENSOR INSTRUMENTATION BOX. LIMITED UT FROM THE NOZZLE SIDE DUE TO NOZZLE CONFIGURATION. |
| B-D                                   | IN  | UT45         | 0          | 33            | 67       | 84         |       |  |
| B3.130                                | FIGURE NO. A-SG-1   | UT45T        | 2          | 5             | 93       | 96         |       |  |
| VOL                                   |   | UT60         | 2          | 60            | 38       | 68         |       |  |
|                                       | NOZZLE-TO-SHELL   | UT60T        | 3          | 6             | 91       | 94         |       |  |
|                                       | UT  |              |            |               |          |            | 88    |  |
| 1                                     | SG-2A   | UT0          | 2          | -             | -        | 98         |       | LIMITED UT FROM THE HEAD SIDE DUE TO PROXIMITY OF VIBRATION SENSOR INSTRUMENTATION BOX. LIMITED UT FROM THE NOZZLE SIDE DUE TO NOZZLE CONFIGURATION. |
| B-D                                   | ON  | UT45         | 0          | 33            | 67       | 84         |       |  |
| B3.130                                | FIGURE NO. A-SG-1   | UT45T        | 2          | 5             | 93       | 96         |       |  |
| VOL                                   |   | UT60         | 2          | 60            | 38       | 68         |       |  |
|                                       | SHELL-TO-NOZZLE   | UT60T        | 3          | 6             | 91       | 94         |       |  |
|                                       | UT  |              |            |               |          |            | 88    |  |
| 1                                     | SG-2D   | UT0          | 2          | -             | -        | 98         |       | LIMITED UT FROM THE HEAD SIDE DUE TO PROXIMITY OF VIBRATION SENSOR INSTRUMENTATION BOX. LIMITED UT FROM THE NOZZLE SIDE DUE TO NOZZLE CONFIGURATION. |
| B-D                                   | IN  | UT45         | 0          | 33            | 67       | 84         |       |  |
| B3.130                                | FIGURE NO. A-SG-2   | UT45T        | 2          | 5             | 93       | 96         |       |  |
| VOL                                   |   | UT60         | 2          | 60            | 38       | 68         |       |  |
|                                       | NOZZLE-TO-SHELL   | UT60T        | 3          | 6             | 91       | 94         |       |  |
|                                       | UT  |              |            |               |          |            | 88    |  |
| 1                                     | SG-2D   | UT0          | 2          | -             | -        | 98         |       | LIMITED UT FROM THE HEAD SIDE DUE TO PROXIMITY OF VIBRATION SENSOR INSTRUMENTATION BOX. LIMITED UT FROM THE NOZZLE SIDE DUE TO NOZZLE CONFIGURATION. |
| B-D                                   | ON  | UT45         | 0          | 33            | 67       | 84         |       |  |
| B3.130                                | FIGURE NO. A-SG-2   | UT45T        | 2          | 5             | 93       | 96         |       |  |
| VOL                                   |   | UT60         | 2          | 60            | 38       | 68         |       |  |
|                                       | SHELL-TO-NOZZLE   | UT60T        | 3          | 6             | 91       | 94         |       |  |
|                                       | UT  |              |            |               |          |            | 88    |  |



# ASME SECTION XI CODE COVERAGE LIMITATIONS

1991 2RE02 ISI

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 2

## ASME CATEGORY B-F

SYSTEM: REACTOR COOLANT - MAIN LOOPS (CLASS 1 PIPING)

| CLASS<br>CATGY<br>ITEM NO.<br>EXM RQT | - LINE NO./SUBASSEMBLY<br>- WELD IDENTIFICATION<br>- WELD ID FIGURE<br>- EXAMINATION METHOD | EXAM<br>TYPE | % COVERAGE |               |          |              |       | LIMITATION  |
|---------------------------------------|---|--------------|------------|---------------|----------|--------------|-------|---|
|                                       |   |              | NONE       | 1 DIR<br>ONLY | 2<br>DIR | EFF.<br>COV. | TOTAL |   |
| 1<br>B-F<br>B5.130<br>VOL/SURF        | 31-RC-2102<br>1<br>FIGURE NO. A-RC-1<br>NOZZLE-TO-ELBOW<br>UT/PT                            | UT45/60      | 2          | 98            | 0        | 49           |       | LIMITED UT FROM BOTH SIDES AND ON<br>THE WELD DUE TO WELD CONFIGURATION<br>AND SIZE OF THE SEARCH UNIT. |
|                                       |   | UT45T        | 10         | 0             | 90       | 90           | 70    |   |
|                                       |   |              |            |               |          |              |       |   |
|                                       |   | PT           | 0          | -             | -        | -            | 100   |   |
| 1<br>B-F<br>B5.130<br>VOL/SURF        | 31-RC-2402<br>1<br>FIGURE NO. A-RC-4<br>NOZZLE-TO-ELBOW<br>UT/PT                            | UT45/60      | 2          | 98            | 0        | 49           |       | LIMITED UT FROM BOTH SIDES AND ON<br>THE WELD DUE TO WELD CONFIGURATION<br>AND SIZE OF THE SEARCH UNIT. |
|                                       |   | UT45T        | 10         | 0             | 90       | 90           | 70    |   |
|                                       |   |              |            |               |          |              |       |   |
|                                       |   | PT           | 0          | -             | -        | -            | 100   |   |
| 1<br>B-F<br>B5.130<br>VOL/SURF        | 29-RC-2101<br>5<br>FIGURE NO. A-RC-1<br>ELBOW-TO-NOZZLE<br>UT/PT                            | UT45/60      | 2          | 98            | 0        | 49           |       | LIMITED UT FROM BOTH SIDES AND ON<br>THE WELD DUE TO WELD CONFIGURATION<br>AND SIZE OF THE SEARCH UNIT. |
|                                       |   | UT45T        | 10         | 0             | 90       | 90           | 70    |   |
|                                       |   |              |            |               |          |              |       |   |
|                                       |   | PT           | 0          | -             | -        | -            | 100   |   |
| 1<br>B-F<br>B5.130<br>VOL/SURF        | 29-RC-2401<br>4<br>FIGURE NO. A-RC-4<br>ELBOW-TO-NOZZLE<br>UT/PT                            | UT45/60      | 1          | 99            | 0        | 50           |       | LIMITED UT FROM BOTH SIDES AND ON<br>THE WELD DUE TO WELD CONFIGURATION<br>AND SIZE OF THE SEARCH UNIT. |
|                                       |   | UT45T        | 8          | 0             | 92       | 92           | 71    |   |
|                                       |   |              |            |               |          |              |       |   |
|                                       |   | PT           | 0          | -             | -        | -            | 100   |   |

# ASME SECTION XI CODE COVERAGE LIMITATIONS

1991 2RE02 ISI

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 2

## ASME CATEGORY B-J

SYSTEM: REACTOR COOLANT (CLASS 1)

| CLASS<br>CATEGORY<br>ITEM NO.<br>EXM RQT | - LINE NO./SUBASSEMBLY<br>- WELD IDENTIFICATION<br>- WELD ID FIGURE<br>- EXAMINATION METHOD | EXAM<br>TYPE | % COVERAGE |               |          |             |       | LIMITATION  |
|--|---|--------------|------------|---------------|----------|-------------|-------|---|
|  |   |              | NONE       | 1 DIR<br>ONLY | 2<br>DIR | EFF.<br>COV | TOTAL |   |
| 1<br>B-J<br>B9.11<br>VOL/SURF            | 31-RC-2102  | UT45         | 0          | 33            | 67       | 84          |       | LIMITED UT FROM BOTH SIDES AND ON<br>THE WELD DUE TO WELD CONFIGURATION<br>AND SIZE OF THE SEARCH UNIT. |
|  | 9   | UT45T        | 100        | 0             | 0        | 0           |       |   |
|  | FIGURE NO. A-RC-1   |              |            |               |          |             | 42    |   |
|  | ELBOW-TO-PUMP   |              |            |               |          |             |       |   |
|  | UT/PT   | PT           | 0          | -             | -        | -           | 100   |   |
| 1<br>B-J<br>B9.31<br>VOL/SURF            | 29-RC-2101  | UT24/45      | 10         | 90            | 0        | 45          |       | LIMITED UT FROM THE BC SIDE DUE TO<br>BC CONFIGURATION.   |
|  | 3   |              |            |               |          |             |       |   |
|  | FIGURE NO. A-RC-1   |              |            |               |          |             | 45    |   |
|  | 12" BRANCH CONNECTION   |              |            |               |          |             |       |   |
|  | UT/PT   | PT           | 0          | -             | -        | -           | 100   |   |

# ASME SECTION XI CODE COVERAGE LIMITATIONS

1991 2RE02 ISI

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNIT 2

## ASME CATEGORY C-F-1

SYSTEM SAFETY INJECTION (CLASS 2)

| CLASS<br>CATEGORY<br>ITEM NO.<br>EXM RQT | - LINE NO./SUBASSEMBLY<br>- WELD IDENTIFICATION<br>- WELD ID FIGURE<br>- EXAMINATION METHOD | EXAM<br>TYPE | % COVERAGE |            |       |           |       | LIMITATION  |
|--|---|--------------|------------|------------|-------|-----------|-------|---|
|  |   |              | NONE       | 1 DIR ONLY | 2 DIR | EFF. COV. | TOTAL |   |
| 2<br>C-F-1<br>CS 11<br>VOL/SURF          | 6-SI-2107   | UT45/60      | 8          | 34         | 58    | 75        |       | LIMITED UT FROM THE VALVE SIDE<br>DUE TO VALVE CONFIGURATION. |
|  | 1   | UT45T        | 0          | 0          | 100   | 100       |       |   |
|  | FIGURE NO. B-SI-14  |              |            |            |       |           | 88    |   |
|  | VALVE-TO-PIPE   |              |            |            |       |           |       |   |
|  | UT/PT   | PT           | 0          | -          | -     | -         | 100   |   |
| 2<br>C-F-1<br>CS 11<br>VOL/SURF          | 6-SI-2109   | UT45/60      | 2          | 41         | 57    | 78        |       | LIMITED UT FROM THE VALVE SIDE<br>DUE TO VALVE CONFIGURATION. |
|  | 11  | UT45T        | 0          | 0          | 100   | 100       |       |   |
|  | FIGURE NO. B-SI-14  |              |            |            |       |           | 89    |   |
|  | PIPE-TO-VALVE   |              |            |            |       |           |       |   |
|  | UT/PT   | PT           | 0          | -          | -     | -         | 100   |   |

APPENDIX 2-E

OWNER'S REPORT FOR INSERVICE INSPECTIONS  
NIS-1 FORMS



## FORM NIS-1 (Back)

8. Examination Dates 09/29/91 to 11/21/91 9. Inspection Interval from 06/19/89 to 06/19/99

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 Section 2.4 and Appendix 2-A of 2RE02 Summary Report for list of examinations performed.  
The examinations performed this outage constitute 29 percent of the required examinations for the current interval.

11. Abstract of Conditions Noted.

None.

12. Abstract of Corrective Measures Recommended and Taken.

None.

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 FEB 26 19 92 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 9-13-91 to 3-6-92, 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.

Inspector's Signature

B. R. Russell

Commissions

Factory Mutual System

Tex 826

National Board, State, Province, and Endorsements

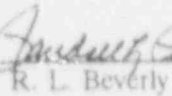
Date 3-6-19 92

**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 2 4. Owner and Certificate of Authorization (if required) N.A.
5. Commercial Service Date 06/19/89 6. National Board Number for Unit N.A.

| ASME<br>CATEGORY | ASME<br>ITEM | COMPONENT<br>or SYSTEM | IDENTIFICATION NO. | EXAM<br>METHOD | REMARKS                       |
|------------------|--------------|------------------------|--------------------|----------------|-------------------------------|
| B-A              | B1.30        | RPV                    | RPV2-101-121       | UT             | FLANGE TO UPPER SHELL         |
| B-D              | B3.110       | PRZ                    | PRZ-2-N1           | UT             | SURGE NOZZLE TO SHELL         |
| B-D              | B3.120       | PRZ                    | PRZ-2-N1-IR        | UT             | SURGE NOZZLE INNER RADIUS     |
| B-B              | B2.31        | SG                     | SG-2A-SR1          | UT             | CHANNEL HEAD CAP TO SUPT RING |
| B-B              | B2.40        | SG                     | SG-2A-SR2          | UT             | SUPPORT RING TO TUBE PLATE    |
| B-D              | B3.130       | SG                     | SG-2A-IN           | UT             | INLET NOZ TO CHNL HEAD CAP    |
| B-D              | B3.130       | SG                     | SG-2A-ON           | UT             | CHNL HEAD CAP TO OUTLET NOZ   |
| B-D              | B3.140       | SG                     | SG-2A-IN-IR        | UT             | INLET NOZ INNER RADIUS        |
| B-D              | B3.140       | SG                     | SG-2A-ON-IR        | UT             | OUTLET NOZ INNER RADIUS       |
| B-G-2            | B7.30        | SG                     | SG-2A-IMB          | VT-1           | INLET MANWAY BOLTING          |
| B-G-2            | B7.30        | SG                     | SG-2A-OMB          | VT-1           | OUTLET MANWAY BOLTING         |
| B-B              | B2.31        | SG                     | SG-2D-SR1          | UT             | CHANNEL HEAD CAP TO SUPT RING |
| B-B              | B2.40        | SG                     | SG-2D-SR2          | UT             | SUPPORT RING TO TUBE PLATE    |
| B-D              | B3.130       | SG                     | SG-2D-IN           | UT             | INLET NOZ TO CHNL HEAD CAP    |
| B-D              | B3.130       | SG                     | SG-2D-ON           | UT             | CHNL HEAD CAP TO OUTLET NOZ   |
| B-D              | B3.140       | SG                     | SG-2D-IN-IR        | UT             | INLET NOZZLE INNER RADIUS     |
| B-D              | B3.140       | SG                     | SG-2D-ON-IR        | UT             | OUTLET NOZZLE INNER RADIUS    |
| B-G-2            | B7.30        | SG                     | SG-2D-IMB          | VT-1           | INLET MANWAY BOLTING          |
| B-G-2            | B7.30        | SG                     | SG-2D-OMB          | VT-1           | OUTLET MANWAY BOLTING         |
| B-F              | B5.130       | RC                     | 31-RC-2102-1       | UT,PT          | SG OUTLET NOZZLE TO ELBOW     |
| B-J              | B9.32        | RC                     | 31-RC-2102-5       | PT             | 3-IN. BRANCH CONNECTION       |
| B-J              | B9.11        | RC                     | 31-RC-2102-9       | UT,PT          | ELBOW TO REACTOR COOLANT PUMP |
| B-F              | B5.130       | RC                     | 31-RC-2402-1       | UT,PT          | SG OUTLET NOZZLE TO ELBOW     |
| B-J              | B9.31        | RC                     | 29-RC-2101-3       | UT,PT          | 12-IN. BRANCH CONNECTION      |
| B-F              | B5.130       | RC                     | 29-RC-2101-5       | UT,PT          | ELBOW TO SG INLET NOZZLE      |
| B-F              | B5.130       | RC                     | 29-RC-2401-4       | UT,PT          | ELBOW TO SG INLET NOZZLE      |
| B-J              | B9.11        | RC                     | 12-RC-2112-2       | UT,PT          | PIPING BUTT WELD              |
| B-J              | B9.11        | RC                     | 12-RC-2112-7       | UT,PT          | PIPING BUTT WELD              |
| B-J              | B9.11        | RC                     | 12-RC-2112-11      | UT,PT          | PIPING BUTT WELD              |
| B-J              | B9.11        | RC                     | 12-RC-2125-2       | UT,PT          | PIPING BUTT WELD              |
| B-J              | B9.11        | RC                     | 12-RC-2125-3       | UT,PT          | PIPING BUTT WELD              |
| B-J              | B9.11        | RC                     | 12-RC-2125-14      | UT,PT          | PIPING BUTT WELD              |
| B-J              | B9.11        | RC                     | 8-RC-2114-1        | UT,PT          | PIPING BUTT WELD              |
| B-J              | B9.11        | RC                     | 6-RC-2003-11A      | UT,PT          | PIPING BUTT WELD (BASELINE)   |
| B-J              | B9.11        | RC                     | 6-RC-2003-11B      | UT,PT          | PIPING BUTT WELD (BASELINE)   |
| B-G-2            | B7.50        | RC                     | 6-RC-2009-9FB      | VT-1           | FLANGE BOLTING (BASELINE)     |

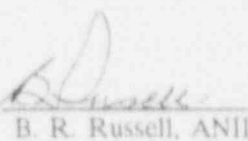
HL&amp;P by

  
 R. L. Beverly

Date

2/26/92

Factory Mutual by

  
 B. R. Russell, ANII

Date

3-6-92



**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 2 4. Owner and Certificate of Authorization (if required) N.A.
5. Commercial Service Date 06/19/89 6. National Board Number for Unit N.A.

| ASME<br>CATGY | ASME<br>ITEM | COMPONENT<br>or SYSTEM | IDENTIFICATION NO. | EXAM<br>METHOD | REMARKS                     |
|---------------|--------------|------------------------|--------------------|----------------|-----------------------------|
| B-J           | B9.11        | RC                     | 4-RC-2126-1        | UT,PT          | PIPING BUTT WELD            |
| NRCB          | 88-08        | RC                     | 4-RC-2126-1        | UT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.11        | RC                     | 4-RC-2126-2        | UT,PT          | PIPING BUTT WELD            |
| NRCB          | 88-08        | RC                     | 4-RC-2126-2        | UT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.11        | RC                     | 4-RC-2126-3        | UT,PT          | PIPING BUTT WELD            |
| NRCB          | 88-08        | RC                     | 4-RC-2126-3        | UT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.11        | RC                     | 4-RC-2323-1        | UT,PT          | PIPING BUTT WELD            |
| NRCB          | 88-08        | RC                     | 4-RC-2323-1        | UT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.11        | RC                     | 4-RC-2323-2        | UT,PT          | PIPING BUTT WELD            |
| NRCB          | 88-08        | RC                     | 4-RC-2323-2        | UT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.21        | RC                     | 3-RC-2003-1        | PT             | PIPING BUTT WELD            |
| NRCB          | 88-08        | RC                     | 3-RC-2003-1        | UT             | PIPING BUTT WELD (AUG. 181) |
| B-J           | B9.21        | RC                     | 3-RC-2003-2        | PT             | PIPING BUTT WELD            |
| B-J           | B9.21        | RC                     | 2.5-RC-2003-1      | PT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.21        | RC                     | 2.5-RC-2003-2      | PT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.21        | RC                     | 2.5-RC-2003-3      | PT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.21        | RC                     | 2.5-RC-2003-4      | PT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.21        | RC                     | 2.5-RC-2003-5      | PT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.21        | RC                     | 2.5-RC-2003-6      | PT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.21        | RC                     | 2-RC-2003-1        | PT             | PIPING BUTT WELD            |
| NRCB          | 88-08        | RC                     | 2-RC-2003-1        | UT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.21        | RC                     | 2-RC-2003-2        | PT             | PIPING BUTT WELD            |
| NRCB          | 88-08        | RC                     | 2-RC-2003-2        | UT             | PIPING BUTT WELD (BASELINE) |
| B-J           | B9.11        | SI                     | 12-SI-2125-4       | UT,PT          | PIPING BUTT WELD            |
| B-J           | B9.11        | SI                     | 8-SI-2108-2        | UT,PT          | PIPING BUTT WELD            |
| B-J           | B9.11        | SI                     | 8-SI-2108-4        | UT,PT          | PIPING BUTT WELD            |
| B-J           | B9.11        | SI                     | 6-SI-2108-3        | UT,PT          | PIPING BUTT WELD            |
| B-J           | B9.11        | SI                     | 6-SI-2111-1        | UT,PT          | PIPING BUTT WELD            |
| B-G-2         | B7.70        | VALVES                 | XSI0046C-VB        | VT-1           | VALVE BOLTING               |
| B-M-2         | B12.50       | VALVES                 | XSI0046C-VIS       | VT-3           | VALVE INTERNAL SURFACE      |

HL&amp;P by

R. L. Beverly

Date 2/6/92

Factory Mutual by  
System

B. R. Russell, ANII

Date

3-6-92





## FORM NIS-1 (Back)

8. Examination Dates 08/27/91 to 10/29/91 9. Inspection Interval from 06/19/89 to 06/19/99
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 Section 2.4 and Appendix 2-A of 2RE02 Summary Report for list of examinations performed.  
The examinations performed this outage constitute 30 percent of the required examinations for the current interval.
11. Abstract of Conditions Noted.  
None.
12. Abstract of Corrective Measures Recommended and Taken.  
None.

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 FEB. 26 19 92 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 9-13-91 to 3-6-92, 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  
Inspector's Signature  
B. R. Russell

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

Date 3-6-19 92

**SUPPLEMENT TO FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS  
FOR  
ASME Code Class 2 (IWC) 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 2 4. Owner and Certificate of Authorization (if required) N.A.
5. Commercial Service Date 06/19/89 6. National Board Number for Unit N.A.

| ASME<br>CATGY | ASME<br>ITEM | COMPONENT<br>or SYSTEM | IDENTIFICATION NO.   | EXAM<br>METHOD | REMARKS                        |
|---------------|--------------|------------------------|----------------------|----------------|--------------------------------|
| C-A           | C1.10        | SG                     | SG-2A-S5             | UT             | TRANSITION CONE TO UPPER SHELL |
| C-A           | C1.20        | SG                     | SG-2A-S7             | UT             | UPPER SHELL TO UPPER HEAD      |
| C-B           | C2.21        | SG                     | SG-2A-AP9            | UT,MT          | AUX FEEDWATER NOZZLE TO SHELL  |
| C-C           | C3.10        | SG                     | SG-2A-TR11           | PT             | TRUNNION A                     |
| C-F-2         | C5.51        | FW                     | 18-FW-2012-5         | UT,MT          | PIPING BUTT WELD               |
| C-F-2         | C5.51        | FW                     | 18-FW-2032-1         | UT,MT          | PIPING BUTT WELD               |
| C-F-2         | C5.51        | FW                     | 18-FW-2032-2         | UT,MT          | PIPING BUTT WELD               |
| C-F-2         | C5.51        | FW                     | 18-FW-2032-3         | UT,MT          | PIPING BUTT WELD               |
| C-F-2         | C5.51        | FW                     | 18-FW-2032-4         | UT,MT          | PIPING BUTT WELD               |
| C-F-2         | C5.51        | FW                     | 18-FW-2032-5         | UT,MT          | PIPING BUTT WELD               |
| C-F-2         | C5.51,52     | MS                     | 30-MS-2001-1,1LD     | UT,MT          | PIPING BUTT/LONG. WELDS        |
| C-F-2         | C5.52        | MS                     | 30-MS-2001-25LD      | UT,MT          | LONGITUDINAL WELD              |
| C-F-2         | C5.52        | MS                     | 30-MS-2001-28LU      | UT,MT          | LONGITUDINAL WELD              |
| C-F-2         | C5.51        | MS                     | 16-MS-2001-2         | UT,MT          | PIPING BUTT WELD               |
| C-F-1         | C5.11,12     | SI                     | 16-SI-2101-1,1LU,1LD | UT,PT          | PIPING BUTT/LONG. WELDS        |
| C-F-1         | C5.11,12     | SI                     | 16-SI-2101-4,4LU,4LD | UT,PT          | PIPING BUTT/LONG. WELDS        |
| C-F-1         | C5.11,12     | SI                     | 16-SI-2101-6,6LD     | UT,PT          | PIPING BUTT/LONG. WELDS        |
| C-F-1         | C5.11,12     | SI                     | 12-SI-2101-1,1LD     | UT,PT          | PIPING BUTT/LONG. WELDS        |
| C-F-1         | IEB79-17     | SI                     | 10-SI-2101-2,2LU,2LD | UT,PT          | PIPING BUTT/LONG. WELDS        |
| C-F-1         | C5.11        | SI                     | 6-SI-2106-3          | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.11        | SI                     | 6-SI-2106-4          | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.11        | SI                     | 6-SI-2106-6          | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.11        | SI                     | 6-SI-2106-7          | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.11        | SI                     | 6-SI-2107-1          | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.11        | SI                     | 6-SI-2107-2          | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.11        | SI                     | 6-SI-2107-3          | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.11        | SI                     | 6-SI-2109-9          | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.11        | SI                     | 6-SI-2109-10         | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.11        | SI                     | 6-SI-2109-11         | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.11        | SI                     | 6-SI-2110-1          | UT,PT          | PIPING BUTT WELD               |
| C-F-1         | C5.30        | SI                     | 2-SI-2106-2          | PT             | PIPING SOCKET WELD             |
| C-F-1         | C5.30        | SI                     | 2-SI-2139-1          | PT             | PIPING SOCKET WELD             |
| C-G           | C6.10        | CS PUMPS               | CIAPCS-2A-PCW2       | PT             | UPPER CASE TO LOWER CASE       |
| C-G           | C6.10        | RH PUMPS               | RHARHS-2A-PCW4       | PT             | PUMP CASING TO NOZZLE          |
| C-G           | C6.10        | HHSI PUMPS             | SIAPHH-2A-PCW2       | PT             | UPPER CASE TO LOWER CASE       |
| C-G           | C6.10        | LHSI PUMPS             | SIAPLH-2A-PCW2       | PT             | UPPER CASE TO LOWER CASE       |

HL&P by R. L. Beverly

Date 2/16/92

Factory Mutual by B. R. Russell  
System

Date 3-6-92

B. R. Russell, ANII

### 3.0 STEAM GENERATOR TUBE EXAMINATIONS

#### 3.1 Introduction

This section of the summary report addresses the eddy current ISI of selected tubes in Steam Generators A, B, C and D conducted during the 1991 refueling outage of the South Texas Project Electric Generating Station, Unit 2 (2RE02). It is intended to respond to the reporting requirements of ASME Code Section XI, IWA-6000 and 4.4.5.5 (b) of the STPEGS Technical Specification.

The STPEGS Unit 2 plant design contains four (4) steam generators. Each of the steam generators is a model E2 recirculating design generator, designed and fabricated by Westinghouse Electric Corporation of Tampa, Florida. The design of each generator has 4851 tubes in service. The tubing is ASTM SB-163 Inconel material having a nominal outer diameter (OD) of 0.75 inches and nominal wall thickness of 0.043 inches.

The examination agency for the 2RE02 eddy current examination of steam generator tubes was Westinghouse Electric Corporation. They acquired the first eddy current data on October 13, 1991. The last eddy current data analysis was performed on October 20, 1991.

#### 3.2 Scope of Examinations

The STPEGS-2 ten year ISI plan, previously filed with the NRC, describes the ISI program for examination of steam generator tubing. Additionally, a supplemental ISI plan (ISI Outage Plan) entitled, "1991 Outage Plan for the Inservice Inspection of Steam Generator Tubing at the South Texas Project Electric Generating Station, Unit 2" was prepared by Houston Lighting & Power Company (HL&P). The ISI Outage Plan identified the steam generator tube areas expected to be examined and the eddy current examination procedures expected to be used during this ISI. Prior to the beginning of the ISI, tubes were selected in accordance with 4.4.5.2 of the STPEGS technical specification (NUREG - 1346) and assigned to the first (approximately 4%) sample of tubes in each of the four (4) steam generators to be examined. These first samples were listed in the ISI Outage Plan.

Because the results of the initial examinations identified by the ISI Outage Plan could have identified a situation where additional

examinations of other tube areas or the same tube areas (with different nondestructive examination techniques or methods) would be required or advisable, the ISI Outage Plan established a method for quickly changing the plan scope or other details during the outage. Changes were made by issuing an Outage Plan Change Form. One (1) change was made to the ISI Outage Plan during the outage. The change form is included as Appendix 3-A. The ISI Outage Plan and plan changes are consistent with the requirements of the ten year ISI plan.

### 3.3 Personnel, Procedures, and Equipment

#### 3.3.1 Personnel Qualifications

The Westinghouse personnel who performed eddy current examinations and data analysis were certified in accordance with the requirements of IWA-2300 of ASME Code Section XI and a Westinghouse certification practice approved by HL&P. In addition, all data analysts were required to have satisfactorily completed (1) specific training in eddy current data analysis and (2) site specific training. The site specific training lecture addressed the specific design and operating history, previous eddy current examination results, and the data acquisition procedure and analysis guideline to be used for the STPEGS Unit 1 and 2 steam generators. The site specific training also included hands on review of indications of flaw types which have been experienced at plants of similar design to that of the STPEGS. Successful completion of the site specific course required the passing of a written and practical (hands on) test. The Westinghouse personnel who performed examinations and data analysis and their certification levels are listed in Appendix 3-B.

#### 3.3.2 Examination and Analysis Procedures

For those eddy current examinations which respond to the requirements of the STPEGS Technical Specifications, Westinghouse used the bobbin probe technique in their procedure entitled, "Digital Multi-Frequency Eddy Current Inspection of Preservice and Inservice Heat Exchanger Tubing" (HL&P Document No. 0120(2)-00151-CWN). This technique was used in each tube examined to record 550, 400, 100, and 10 kHz frequency data using both differential and absolute bobbin probe coil configurations. The Westinghouse bobbin probe procedure (0120(2)-00151-CWN) is an alternative to the technique described

in ASME Code Section V, Article 8, I-42, which requires that the probe pull speed not exceed 14 inches per second. Instead, a maximum pull speed of 24 inches per second was permitted. At this pull speed the digital signal sampling rate must be raised from the typical 400 sample per second to 800 samples per second. This procedure, using the faster probe pull speed, was demonstrated to the satisfaction of the Authorized Nuclear Inservice Inspection (ANII) in accordance with IWA-2240 of Section XI.

The eddy current data analysts worked to HL&P Engineering Instruction EI-8.01, "Steam Generator Eddy Current Data Analysis Guidelines", Revision 0 including the Analysis Guideline Exception Forms entitled "Update 2", "Update 3", "Update 4", and "Update 5". The data for each steam generator tube was analyzed by two (2) independent analysts in accordance with HL&P Engineering Instruction EI-8.02, "Steam Generator Eddy Current Data Control", Revision 1.

Every system calibration and calibration verification has been recorded on a uniquely numbered digital magnetic tape which is stored as a record. The unique digital tape number is entered on the eddy current data sheet. The date and time of every system calibration and calibration verification has been recorded on a Digital Multi-frequency Eddy Current Calibration & Data Analysis Log Sheet which is also considered to be a data sheet. The data sheets are also stored as records. They make it possible to locate the calibration data for each tube examination.

### 3.3.3 Equipment

Westinghouse used MIZ-18A eddy current examination instruments to record the raw data and ANSER (Advanced Network Sharing Eddy Current Resources) system to analyze the data. The MIZ-18A's are manufactured and produced by Zetec, Inc.. The ANSER system is manufactured by Westinghouse. Both the MIZ-18A and ANSER use digital equipment and software which have a significantly improved dynamic range and signal-to-noise ratio as compared to analog systems. The MIZ-18A is capable of being operated at locations remote from the steam generators (e.g., in low radiation areas). Westinghouse used 0.610 inch diameter magnetic biased bobbin coil probes. However, bobbin probes as small as 0.590 inch diameter were used in a few cases in order to



pass the small radiused U-bends in Rows 1 and 2. A motorized rotating pancake probe coil (MRPC) was used to characterize one incidence of wear detected at an anti-vibration bar in Steam Generator D. ASME Boiler and Pressure Vessel Code, Nuclear Components Code Case N-401, "Eddy Current Examination - Section XI, Division 1", was used after the digital equipment and the eddy current technique used were demonstrated to the ANII in accordance with Case N-401.

#### 3.3.4 Calibration Standards

The U-bend areas of the Row 1 and 2 tubes in each steam generator have received an in situ heat treatment to improve their resistance to stress corrosion cracking. The eddy current calibration standards used were not subjected to that heat treatment. ASME Boiler and Pressure Vessel Code, Nuclear Components Code Case N-402, "Eddy Current Calibration Standard Material, Section XI, Division 1" was used. It had been demonstrated to the satisfaction of the ANII that calibration standards with and without this heat treatment result in equivalent examinations. Otherwise, the design and material of the eddy current calibration standards used meet the requirements of the ASME Code Section XI.

#### 3.4 Summary of Examinations

Examinations were conducted in approximately four (4) percent of the total tubes installed in each of four (4) steam generators. The examinations were conducted from the hot leg bowl.

The 201 tubes which constitute the first sample from Steam Generator A, defined in the ISI Outage Plan, were examined. In addition, tube number (row - column number) 12 - 26 was also examined. All of these tubes were examined full length (from tube end to tube end) using a bobbin coil probe.

The 201 tubes which constitute the initially defined first sample from Steam Generator B were examined. In addition, tube number 46 - 80 was also examined. All of these tubes were examined full length using a bobbin coil probe.

The following four (4) tubes, which were in the initially defined first sample from Steam Generator C could not be examined full length

because of the friction induced on the cable by the small radius U-bends:

Tube Number

1 - 56  
1 - 60  
1 - 61  
2 - 49

These four (4) tubes were examined from the 11C support plate, over the U-bend, to the hot leg tube end using a bobbin coil probe. The following four (4) tubes were added to the scope of the ISI Outage Plan to compensate for those which could not be examined full length:

Tube Number

4 - 59  
4 - 69  
4 - 72  
6 - 61

These four (4) tubes along with the remainder of the initially defined first sample from Steam Generator C were examined full length using a bobbin coil probe.

The 201 tubes which constitute the initially defined first sample from Steam Generator D were examined. All of these tubes were examined full length using a bobbin coil probe. In addition, the location of an anti-vibration bar wear indication in tube 46 - 59 was also examined using a motorized rotating pancake coil probe.

### 3.5 Examination Results and Corrective Actions

The location of the indications were recorded relative to the adjacent tube support and baffle plates and anti-vibration bars. The tube support plates and baffle plates were numbered consecutively from 01H to 10H (on the hot leg) and from 11C to 23C (on the cold leg) starting on the hot leg side, over the U-bends, and down the cold leg side of the steam generator. The anti-vibration bars were numbered AV1, AV2, AV3, and AV4 from the hot leg to the cold leg side, respectively. Indications in the tubesheet area were recorded relative to TEH or TSH (hot leg) or TEC or TSC (cold leg) depending on whether the indications were at the tube end (E) or secondary face (S). In addition, the vertical distances from



these landmarks to flaws were recorded.

No flaw was detected with a depth equal to or greater than 40 percent of the nominal tube wall thickness. Five (5) areas of tube degradation with depths greater than 20% of the nominal tube wall thickness were detected in three (3) tubes. Nine (9) other indications which were less than 20% in depth were detected. The Technical Specification 4.4.5.4 a.3 says that a degraded tube means a tube containing imperfections greater than or equal to 20% of the nominal wall thickness caused by a service-induced damage mechanism. Therefore, these nine (9) other indications are not categorized as degraded. One (1) area of anti-vibration bar wear, which was 38% through wall, was detected in Steam Generator D tube 46 - 59. Although the tube wear did not exceed the technical specification plugging limit of 40% through wall, it was plugged as a preventative measure. The plugging of tube 46 - 59 was documented in a Special Report (HL&P Letter No. ST-HL-AE-3921 dated November 4, 1991) which was transmitted to the U. S. Nuclear Regulatory Commission.

Lists, including the locations and depths, of all flaw indications which are characterized as reductions in the tube wall thickness are included in Appendix 3-C.

Indications of two (2) small bulges were detected at the 21C and 22C baffle plates in Steam Generator A tube 46 - 95. Similar signals were detected in this tube during the preservice inspection. Consequently, these small bulges are not thought to be service induced and are not categorized as tube degradation.

Lists of all dents and dings detected in each steam generator are included in Appendix 3-D.

The tubes which were removed from service by plugging prior to this ISI are as follows:

Steam Generator A

|       |        |
|-------|--------|
| 3-20  | 3-61   |
| 21-20 | 9-66   |
| 31-20 | 3-81   |
| 34-20 | 21-87  |
| 35-20 | 31-87  |
| 21-34 | 3-101  |
| 31-34 | 21-101 |
| 3-40  | 31-101 |

Steam Generator B

|       |        |
|-------|--------|
| 3-20  | 3-81   |
| 21-20 | 21-87  |
| 31-20 | 31-87  |
| 21-34 | 3-101  |
| 31-34 | 21-101 |
| 3-40  | 31-101 |
| 3-60  |        |

Steam Generator C

|       |        |
|-------|--------|
| 3-20  | 5-49   |
| 21-20 | 3-50   |
| 31-20 | 4-50   |
| 31-21 | 5-50   |
| 3-24  | 3-61   |
| 21-34 | 3-81   |
| 31-34 | 21-87  |
| 3-40  | 31-87  |
| 40-40 | 3-101  |
| 3-49  | 21-101 |
| 4-49  | 31-101 |

## Steam Generator D

|       |        |
|-------|--------|
| 3-20  | 3-81   |
| 21-20 | 21-87  |
| 31-20 | 31-87  |
| 48-27 | 2-95   |
| 21-34 | 3-101  |
| 31-34 | 21-101 |
| 3-40  | 31-101 |
| 3-60  |        |

Tube 46 -59 in Steam Generator D was removed from service by plugging as a result of the eddy current ISI performed during this outage. No corrective actions were performed as a result of dings, dents, or bulges detected during this ISI.

### 3.6 Certification of Inspections

A Section XI NIS-1 form, "Owner's Report for Inservice Inspections," has been prepared to certify the STPEGS Unit 2 ISI examinations described in this Summary Report. The STPEGS Unit 2 ISI examinations have been certified by our ANIL, Factory Mutual Systems, on the NIS-1 form included in Appendix 3-E.

APPENDIX 3-A

CHANGES TO THE  
ISI OUTAGE PLAN

**OUTAGE PLAN CHANGE FORM**  
**Change No. 1**

**DESCRIPTION OF CHANGE (ADDITION OR DELETION):**

1. Tubes 2-49, 1-56, 1-60, and 1-61 in Steam Generator C will be examined only between 11C and the hot leg tube end.
2. Add bobbin coil examination of the full length of tubes 4-59, 6-61, 4-69, and 4-72 to the scope of Steam Generator C.

**REASON FOR CHANGE:**

1. The chance that small radius U-bend tubes can be examined full length from only one end is small. It would be necessary to examine the tubes from the cold leg in order to do a full length examination. Examination from the cold leg would require additional primary manway entries and would require the Vendor to re-mobilize after the completion of peening.
2. These tubes were added to maintain the number of full length examinations in the plan at 201 after the tubes in Item 1 are changed to a partial length examination.

**TECHNICAL BASIS:**

It has been demonstrated that the friction in small radius U-bend tubes is sufficient to stop most attempts at inserting a probe full length.

**SCHEDULE IMPACT:**

Negligible.

**AUTHORIZATIONS:**

Lead Analyst: XL PD...

Date 10-19-91

CTO Engineer: Jim Fleming

Date 10-19-91

APPENDIX 3-B

LIST OF EXAMINATION AND DATA ANALYSIS PERSONNEL

APPENDIX 3-B

LIST OF EXAMINATION AND DATA ANALYSIS PERSONNEL

| <u>NAME</u>    | <u>LEVEL</u> |
|----------------|--------------|
| Beiers, T. S.  | III          |
| Chiplaskey, G. | I            |
| Dimarco, R. F. | I            |
| Hess, R. J.    | II           |
| Jurina, F. J.  | IIA          |
| Jones, D. J.   | II           |
| Le, Q. V.      | IIA          |
| Miller, G. W.  | II           |
| Pierini, G. P. | III          |
| Vicario, P.    | I Trainee    |

APPENDIX 3-C

FLAWS WITH TUBE WALL THICKNESS REDUCTION



# APPENDIX 3-C

## FLAWS WITH TUBE WALL THICKNESS REDUCTION

| <u>Steam Generator</u> | <u>Row-Column</u> | <u>Depth</u> | <u>Location</u> |
|------------------------|-------------------|--------------|-----------------|
| A                      | 44 - 62           | 24           | AV2             |
|                        |                   | 22           | AV3             |
|                        |                   | 23           | AV4             |
|                        | 46 - 62           | 15           | AV3             |
|                        |                   | 21           | AV4             |
| C                      | 28 - 23           | 12           | AV3             |
| D                      | 43 - 59           | 13           | AV2             |
|                        |                   |              |                 |
|                        | 44 - 59           | 12           | AV3             |
|                        |                   |              |                 |
|                        | 45 - 59           | 17           | AV2             |
|                        |                   | 11           | AV4             |
|                        | 46 - 59           | 11           | AV1             |
|                        |                   | 38           | AV2             |
|                        |                   | 13           | AV3             |
|                        |                   | 12           | AV4             |

APPENDIX 3-D  
DINGS AND DENTS

APPENDIX 3-D  
DINGS AND DENTS

| Steam<br>Generator | Row-<br>Column | Indication<br>Location |
|--------------------|----------------|------------------------|
| A                  | 4 - 90         | 10H + 10.02            |
| A                  | 16 - 26        | 10H + 51.88            |
| C                  | 25 -114        | 10H + 0.00             |
| D                  | 16 - 6         | 10H + 0.00             |
| D                  | 16 - 6         | 10H + 1.66             |
| D                  | 41 -102        | 13C + 21.35            |
| D                  | 43 -25         | 11C + 0.00             |
| D                  | 44 - 99        | AV4 + 0.00             |

APPENDIX 3-E

OWNER'S REPORT FOR INSERVICE INSPECTIONS  
NIS-1 FORM

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 2 4. Owner and Certificate of Authorization (if required) N.A.
5. Commercial Service Date 06/19/89 6. National Board Number for Unit N.A.
7. Components Inspected ASME Code Class 1 (IWB) Items - Steam Generator Tubes

[illegible]

HL&P by Landace & P.  
R. L. Beverly

Date 2/26/92

### Factory Mutual by System

B. R. Russell, ANII

Date 3-9-92

## FORM NIS-1 (Back)

8. Examination Dates 10/13/91 to 10/20/91 9. Inspection Interval from 06/19/89 to 06/19/9910. 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 - Steam Generator tubes)  
See Section 3.4.1 of the 2RE02 Summary Report.

11. Abstract of Conditions Noted.

See Section 3.5 of the 2RE02 Summary Report

12. Abstract of Corrective Measures Recommended and Taken.

See Section 3.5 of the 2RE02 Summary Report

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 FEB. 26 19 92 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 10-13-91 to 3-9-92, 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  
Inspector's Signature Tex 826  
B. R. Russell National Board, State, Province, and Endorsements

Date 3-9- 19 92

#### 4.0 COMPONENT SUPPORT EXAMINATIONS

##### 4.1 Introduction

ISI of Class 1, 2, and 3 component supports and Class 3 integral attachments of STPEGS-2 was performed between August 16 and December 15, 1991. These examinations constitute the second ISI and completion of the first inspection period of the first inspection interval for the Component Supports Examination Program for STPEGS-2.

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 5U036JS004, "Inservice Inspection Examination of Component Supports of South Texas Project Electric Generating Unit 2 First Inspection Interval",
- (2) "Examination Plan for the 1991 - 2RE02 Inservice Inspection at the South Texas Project Electric Generating Station, Unit 2" 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 1991 Examination Plan is an individual Outage Plan for implementing ISI component support examinations as designated in the HL&P Specification.

##### 4.2 Scope of Examinations

A total of fifty-seven (57) component supports were visually examined during 2RE02.

###### Class 1

Four (4) Class 1 piping supports and one (1) Class 1 equipment support were examined in the following systems:

|                                | <u>Piping</u> | <u>Equipment</u> |
|--------------------------------|---------------|------------------|
| Chemical & Volume Control (CV) | 1             | 0                |
| Reactor Coolant (RC)           | 2             | 1                |
| Residual Heat Removal (RH)     | 1             | 0                |

### Class 2

Twenty-one (21) Class 2 piping supports were examined in the following systems:

|                            | <u>Piping</u> | <u>Equipment</u> |
|----------------------------|---------------|------------------|
| Auxiliary Feedwater (AF)   | 2             | 0                |
| Containment Spray (CS)     | 1             | 0                |
| Residual Heat Removal (RH) | 5             | 0                |
| Safety Injection (SI)      | 13            | 0                |

### Class 3

Thirty-two (32) Class 3 piping supports were examined in the following systems:

|                              | <u>Piping</u> | <u>Equipment</u> |
|------------------------------|---------------|------------------|
| Auxiliary Feedwater (AF)     | 5             | 0                |
| Component Cooling (CC)       | 23            | 0                |
| Essential Cooling Water (EW) | 4             | 0                |

A complete list of component supports examined during 2RE02 is contained in Appendix 4-A.

When combined with the component supports examined during the first refueling outage, these examinations constitute the following percentages of completion for Class 1, 2, and 3 component supports during the first inspection interval:

|              |     |
|--------------|-----|
| Class 1(IWF) | 21% |
| Class 2(IWF) | 27% |
| Class 3(IWF) | 24% |

## 4.3 Personnel and Procedures

### 4.3.1 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 Nondestructive Examination Procedure NDEP 1.0 (Rev. 3), "Qualification and Certification for Examination Personnel". A listing of the personnel who performed visual examinations of component supports, including their certification level, is included in Appendix 4-B.



#### 4.3.2 Examination Procedure

Visual (VT-3 and VT-4) examinations of component supports were performed in accordance with NDEP 9.2 (Rev. 0), "Visual Examination of Component Supports for ASME XI Inservice Inspection".

#### 4.4 Summary of Examinations

##### 4.4.1 Piping and Equipment Supports

Fifty-six (56) piping supports and one (1) equipment support were examined just prior to and during 2RE02 as shown in Appendix 4-A.

##### 4.4.2 Additional and Successive Examinations

The results of the visual examinations of component supports performed during 2RE02 did not require that any additional examinations (IWF-2430) be performed or any successive examinations (IWF-2420) be scheduled.

#### 4.5 Examination Results and Corrective Actions

One (1) hanger was found with loose nuts on the pipe clamp. These nuts were tightened during the refueling outage and the support was reexamined with satisfactory results. An evaluation of the support determined that its operability was not affected.

Table 4-1

#### Summary of Component Support Visual Indication Disposition

| <u>Component ID</u> | <u>Condition</u> | <u>RFA No.</u> | <u>Disposition</u> | <u>WR No.</u> |
|---------------------|------------------|----------------|--------------------|---------------|
| AF-2011-HL5006      | Loose nuts       | 91-1299        | Tightened nuts     | AF-111652     |

#### 4.6 Certification of Inspections

Section XI NIS-1 forms, "Owner's Report for Inservice Inspections", have been prepared to certify the STPEGS-2 component support ISI examinations described in this section of the Summary Report. The STPEGS-2 component support ISI examinations have been certified by our ANII, Factory Mutual Systems, on the NIS-1 forms included in Appendix 4-C.

APPENDIX 4-A  
SUMMARY OF EXAMINATIONS

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UN. 2  
INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2RED2  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 1

CHEMICAL&VOLUME CONTROL 1

| SUMMARY EXAMINATION AREA  |                | ASME    |        |             | N                     | O |   |
|---------------------------|----------------|---------|--------|-------------|-----------------------|---|---|
|                           |                | SEC. XI |        |             | O                     | G | T |
|                           |                | CATGY   | EXAM   |             | R                     | E | H |
|                           |                | ITEM NO | METHOD | PROCEDURE   | E                     | O | E |
| NUMBER                    | IDENTIFICATION |         |        |             | C                     | M | R |
|                           |                |         |        |             | REMARKS               |   |   |
|                           |                |         |        |             | **CALIBRATION BLOCK** |   |   |
| <u>2-CV-2121-BB1-B1A1</u> |                |         |        |             |                       |   |   |
| 100700                    | CV-2121-HS5008 | PIPING  | VT-3   | NDEP 9.2 RD | X                     | - | - |
|                           | RR             |         |        |             |                       |   |   |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 2

REACTOR COOLANT 1

| SUMMARY EXAMINATION AREA |                | ASME    |        |           | N | O |                       |
|--------------------------|----------------|---------|--------|-----------|---|---|-----------------------|
|                          |                | SEC. XI |        |           | O | G | T                     |
|                          |                | CATGY   | EXAM   |           | R | E | H                     |
| NUMBER                   | IDENTIFICATION | ITEM NO | METHOD | PROCEDURE | E | O | E                     |
|                          |                |         |        |           | C | M | R                     |
|                          |                |         |        |           |   |   | REMARKS               |
|                          |                |         |        |           |   |   | **CALIBRATION BLOCK** |

4-RC-2123-BB1-B

|        |              |        |      |             |   |   |   |
|--------|--------------|--------|------|-------------|---|---|---|
| 107000 | RC-2123-RR13 | PIPING | VT-3 | NDEP 9.2 RD | X | - | - |
|        | RR           |        |      |             |   |   |   |

|        |              |        |      |             |   |   |   |
|--------|--------------|--------|------|-------------|---|---|---|
| 107100 | RC-2123-RR14 | PIPING | VT-3 | NDEP 9.2 RD | X | - | - |
|        | RR           |        |      |             |   |   |   |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 1 COMPLETED COMPONENTS

PAGE: 3

RESIDUAL HEAT REMOVAL 1

|                         |                |        |      | N                     | O |   |
|-------------------------|----------------|--------|------|-----------------------|---|---|
|                         |                |        |      | D                     | G | T |
|                         |                |        |      | R                     | E | H |
|                         |                |        |      | E                     | O | E |
|                         |                |        |      | C                     | M | R |
|                         |                |        |      | **CALIBRATION BLOCK** |   |   |
| -----                   |                |        |      |                       |   |   |
| <u>10-RH-2208-BB1-A</u> |                |        |      |                       |   |   |
| 113800                  | RH-2208-HL5005 | PIPING | VT-3 | NDEP 9.2 RD           | X | - |
|                         | SH-V           | -      | VT-4 |                       | X | - |

REVISION: 0

## SOUTH TEXAS PROJECT UNIT 2

PAGE: 4

INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2RE02

FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)

### CLASS 1 COMPLETED COMPONENTS

## REACTOR COOLANT 1

| SUMMARY EXAMINATION AREA |                       |                          |                 | N              | O         |  |
|--------------------------|-----------------------|--------------------------|-----------------|----------------|-----------|--|
| NUMBER                   | IDENTIFICATION        | ASME<br>SEC. XI<br>CATGY | EXAM<br>ITEM NO | EXAM<br>METHOD | PROCEDURE | REMARKS  |
| *****                    | *****                 | *****                    | *****           | *****          | *****     | *****  |
| 1R132WPP101B             |                       |                          |                 |                |           |  |
| 120700                   | RPR3B<br>RC PUMP RODS | EQUIP                    | VT-3            | NDEP 9.2 RO    | X - -     | 91 - REACTOR COOLANT PUMP 2B - TIE ROD<br>SUPPORT IS LOCATED IMMEDIATELY<br>COUNTERCLOCKWISE FROM THE DISCHARGE<br>NOZZLE. |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2RED2  
FIRST INTERVAL, (FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 5

AUXILIARY FEEDWATER 2

| SUMMARY EXAMINATION AREA |                | ASME    |        |           | N | O |                       |
|--------------------------|----------------|---------|--------|-----------|---|---|-----------------------|
| NUMBER                   | IDENTIFICATION | SEC. XI | CATGY  | EXAM      | O | G | T                     |
|                          |                | ITEM NO | METHOD | PROCEDURE | R | E | H                     |
|                          |                |         |        |           | E | O | E                     |
|                          |                |         |        |           | C | M | R                     |
|                          |                |         |        |           |   |   | REMARKS               |
|                          |                |         |        |           |   |   | **CALIBRATION BLOCK** |

B-AF-2012-GA2-G

|        |                |        |      |             |   |   |   |
|--------|----------------|--------|------|-------------|---|---|---|
| 205700 | AF-2012-HL5021 | PIPING | VT-3 | NDEP 9.2 RD | X | - | - |
|        | GUIDE          | -      |      |             |   |   |   |

B-AF-2012-GA2-K

|        |                |        |      |             |   |   |   |
|--------|----------------|--------|------|-------------|---|---|---|
| 206400 | AF-2012-HL5016 | PIPING | VT-3 | NDEP 9.2 RD | X | - | - |
|        | SH-V           | -      | VT-4 |             | X | - | - |



DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2R02  
FIRST INTERVAL, FIRST PERIOD, SECOND CUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTS

PAGE: 6

CONTAINMENT SPRAY 2

|                          |         |         | N         | O    |                       |
|--------------------------|---------|---------|-----------|------|-----------------------|
|                          |         |         | O         | G    | T                     |
|                          |         |         | R         | E    | H                     |
|                          |         |         | E         | O    | E                     |
|                          |         |         | C         | M    | R                     |
|                          |         |         | -         | -    | -                     |
| SUMMARY EXAMINATION AREA | ASME    | SEC. XI | CATGY     | EXAM | REMARKS               |
| NUMBER IDENTIFICATION    | ITEM NO | METHOD  | PROCEDURE |      | **CALIBRATION BLOCK** |
| -----                    |         |         |           |      |                       |

B-CS-2302-PB2-F

|        |                |    |        |      |             |   |   |   |
|--------|----------------|----|--------|------|-------------|---|---|---|
| 215100 | CS-2302-HL5004 | RR | PIPING | VT-3 | NDEP 9.2 R0 | X | - | - |
|--------|----------------|----|--------|------|-------------|---|---|---|



DATE: 02/06/92  
 REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
 INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2RE02  
 FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
 CLASS 2 COMPLETED COMPONENTS

PAGE: 7

RESIDUAL HEAT REMOVAL 2

|                          |              |         |        |             | N | O |   |                       |
|--------------------------|--------------|---------|--------|-------------|---|---|---|-----------------------|
|                          |              |         |        |             | O | G | T |                       |
|                          |              |         |        |             | R | E | H |                       |
|                          |              |         |        |             | E | O | E | REMARKS               |
| SUMMARY EXAMINATION AREA |              | CATGY   | EXAM   |             | C | M | R |                       |
| NUMBER IDENTIFICATION    |              | ITEM NO | METHOD | PROCEDURE   |   |   |   | **CALIBRATION BLOCK** |
| -----                    |              |         |        |             |   |   |   |                       |
| <u>8-RH-2103-KB2-A</u>   |              |         |        |             |   |   |   |                       |
| 231500                   | RH-2103-SH10 | PIPING  | VT-3   | NDEP 9.2 RD | X | - | - |                       |
|                          | SH-V         | -       | VT-4   |             | X | - | - |                       |
| <u>8-RH-2103-KB2-B</u>   |              |         |        |             |   |   |   |                       |
| 231600                   | RH-2103-SH08 | PIPING  | VT-3   | NDEP 9.2 RD | X | - | - |                       |
|                          | SH-V         | -       | VT-4   |             | X | - | - |                       |
| <u>8-RH-2103-KB2-CA</u>  |              |         |        |             |   |   |   |                       |
| 232100                   | RH-2103-RR07 | PIPING  | VT-3   | NDEP 9.2 RI | X | - | - |                       |
|                          | GUIDE        | -       |        |             |   |   |   |                       |
| <u>8-RH-2104-KB2-B</u>   |              |         |        |             |   |   |   |                       |
| 232800                   | RH-2104-RR02 | PIPING  | VT-3   | NL 9.2 RD   | X | - | - |                       |
|                          | RR           | -       |        |             |   |   |   |                       |
| 232900                   | RH-2104-RR03 | PIPING  | VT-3   | NDEP 9.2 RD | X | - | - |                       |
|                          | RR           | -       |        |             |   |   |   |                       |

DATE: 02/06/92  
 REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
 INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2R02  
 FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
 CLASS 2 COMPLETED COMPONENTS

PAGE: 8

SAFETY INJECTION 2

|                          |         |        |           | M                     | O |   |
|--------------------------|---------|--------|-----------|-----------------------|---|---|
|                          |         |        |           | O                     | G | T |
|                          |         |        |           | R                     | E | H |
|                          |         |        |           | E                     | O | E |
|                          |         |        |           | C                     | M | R |
|                          |         |        |           | REMARKS               |   |   |
|                          |         |        |           | **CALIBRATION BLOCK** |   |   |
| SUMMARY EXAMINATION AREA | CATGY   | EXAM   | PROCEDURE |                       |   |   |
| NUMBER IDENTIFICATION    | ITEM NO | METHOD |           |                       |   |   |

24-SI-2101-UB2-A

|        |                |        |      |             |   |   |   |
|--------|----------------|--------|------|-------------|---|---|---|
| 243800 | SI-2101-HL5021 | PIPING | VT-3 | NDEP 9.2 RO | X | - | - |
|        | SH-V           | -      | VT-4 |             | X | - | - |

24-SI-2101-UB2-B

|        |                |        |      |            |   |   |   |
|--------|----------------|--------|------|------------|---|---|---|
| 244000 | SI-2101-HL5018 | PIPING | VT-3 | ND, . . RO | X | - | - |
|        | RR             | -      |      |            |   |   |   |

|        |                |        |      |             |   |   |   |
|--------|----------------|--------|------|-------------|---|---|---|
| 244100 | SI-2101-HL5022 | PIPING | VT-3 | NDEP 9.2 RO | X | - | - |
|        | RR             | -      |      |             |   |   |   |

24-SI-2101-UB2-D

|        |                |        |      |             |   |   |   |
|--------|----------------|--------|------|-------------|---|---|---|
| 244300 | SI-2101-HL5020 | PIPING | VT-3 | NDEP 9.2 RO | X | - | - |
|        | RR             | -      |      |             |   |   |   |

|        |                |        |      |             |   |   |   |
|--------|----------------|--------|------|-------------|---|---|---|
| 244400 | SI-2101-HL5024 | PIPING | VT-3 | NDEP 9.2 RO | X | - | - |
|        | RR             | -      |      |             |   |   |   |

|        |                |        |      |             |   |   |   |
|--------|----------------|--------|------|-------------|---|---|---|
| 244500 | SI-2101-HL5025 | PIPING | VT-3 | NDEP 9.2 RO | X | - | - |
|        | RR             | -      |      |             |   |   |   |

24-SI-2101-UB2-E

|        |                |        |      |             |   |   |   |
|--------|----------------|--------|------|-------------|---|---|---|
| 244600 | SI-2101-HL5019 | PIPING | VT-3 | NDEP 9.2 RO | X | - | - |
|        | RR             | -      |      |             |   |   |   |

DATE: 02/06/92

REVISION: 0

## SOUTH TEXAS PROJECT UNIT 2

PAGE: 9

INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 2 COMPLETED COMPONENTSSAFETY INJECTION 2

| SUMMARY EXAMINATION AREA  |                |         |        | ASME        | N    | O | REMARKS |                       |   |
|---------------------------|----------------|---------|--------|-------------|------|---|---------|-----------------------|---|
|                           |                |         |        | SEC. XI     | D    | G |         | T                     |   |
|                           |                |         |        | CATGY       | EXAM | R |         | E                     | H |
| NUMBER                    | IDENTIFICATION | ITEM NO | METHOD | PROCEDURE   | E    | O |         | E                     |   |
|                           |                |         |        |             | C    | M | R       | **CALIBRATION BLOCK** |   |
| *****                     |                |         |        |             |      |   |         |                       |   |
| <u>24-SI-2101-UB2-GA</u>  |                |         |        |             |      |   |         |                       |   |
| 245000                    | SI-2101-RR20   | PIPING  | VT-3   | NDEP 9.2 RD | X    | - | -       |                       |   |
|                           | RR             | -       |        |             |      |   |         |                       |   |
| <u>12-SI-2101-LB2-AB</u>  |                |         |        |             |      |   |         |                       |   |
| 249800                    | SI-2101-SH14   | PIPING  | VT-3   | NDEP 9.2 RD | X    | - | -       |                       |   |
|                           | GUIDE          | -       |        |             |      |   |         |                       |   |
| <u>8-SI-2102-PB2-B</u>    |                |         |        |             |      |   |         |                       |   |
| 254600                    | SI-2102-RR03   | PIPING  | VT-3   | NDEP 9.2 RD | X    | - | -       |                       |   |
|                           | RR             | -       |        |             |      |   |         |                       |   |
| 254700                    | SI-2102-RR04   | PIPING  | VT-3   | NDEP 9.2 RD | X    | - | -       |                       |   |
|                           | RR             | -       |        |             |      |   |         |                       |   |
| <u>8-SI-2102-PB2-C</u>    |                |         |        |             |      |   |         |                       |   |
| 254800                    | SI-2102-RR08   | PIPING  | VT-3   | NDEP 9.2 RD | X    | - | -       |                       |   |
|                           | GUIDE          | -       |        |             |      |   |         |                       |   |
| <u>2-SI-2139-DB2-B-A1</u> |                |         |        |             |      |   |         |                       |   |
| 278400                    | SI-2139-HF5002 | PIPING  | VT-3   | NDEP 9.2 RD | X    | - | -       |                       |   |
|                           | U-BOLT         | -       |        |             |      |   |         |                       |   |

DATE: 02/06/92  
 REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
 INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2R02  
 FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
 CLASS 3 COMPLETED COMPONENTS

PAGE: 10

AUXILIARY FEEDWATER 3

| SUMMARY EXAMINATION AREA |                         | ASME    |        |             | N | O |   |
|--------------------------|-------------------------|---------|--------|-------------|---|---|---|
|                          |                         | SEC. XI |        |             | G | T |   |
|                          |                         | CATGY   | EXAM   |             | R | E | H   |
| NUMBER IDENTIFICATION    |                         | ITEM NO | METHOD | PROCEDURE   | E | O | E   |
|                          |                         |         |        |             | C | M | R   |
|                          |                         |         |        |             |   |   | REMARKS   |
|                          |                         |         |        |             |   |   | **CALIBRATION BLOCK**   |
| -----                    |                         |         |        |             |   |   |   |
| <u>4-AF-2011-GA3-HA</u>  |                         |         |        |             |   |   |   |
| 310300                   | AF-2011-HL5005<br>GUIDE | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -   |
| <u>4-AF-2011-GA3-JA</u>  |                         |         |        |             |   |   |   |
| 310400                   | AF-2011-HL5004<br>GUIDE | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -   |
| 310500                   | AF-2011-HL5006<br>RR    | PIPING  | VT-3   | NDEP 9.2 RD | X | - | REEXAMINED AFTER LOOSE NUTS WERE<br>TIGHTENED PER WR# AF-111652. (REF. RFA#<br>91-1299) |
| <u>4-AF-2011-GA3-KA</u>  |                         |         |        |             |   |   |   |
| 310600                   | AF-2011-HL5003<br>GUIDE | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -   |
| <u>4-AF-2011-GA3-MA</u>  |                         |         |        |             |   |   |   |
| 310800                   | AF-2011-HL5002<br>GUIDE | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -   |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2R02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 3 COMPLETED COMPONENTS

PAGE: 11

COMPONENT COOLING 3

| SUMMARY EXAMINATION AREA |                         | ASME    |        |             | N | O |                       |
|--------------------------|-------------------------|---------|--------|-------------|---|---|-----------------------|
|                          |                         | SEC. XI |        |             | O | G | T                     |
|                          |                         | CATGY   | EXAM   |             | R | E | H                     |
|                          |                         | ITEM NO | METHOD | PROCEDURE   | E | O | E                     |
|                          |                         |         |        |             | C | M | R                     |
|                          |                         |         |        |             |   |   | REMARKS               |
|                          |                         |         |        |             |   |   | **CALIBRATION BLOCK** |
| <hr/>                    |                         |         |        |             |   |   |                       |
| <u>24-CC-2101-WA3-C</u>  |                         |         |        |             |   |   |                       |
| 319900                   | CC-2101-HL5004<br>RR    | PIPING  | VT-3   | NDEP 9.2 PD | X | - | -                     |
| <u>24-CC-2101-WA3-C</u>  |                         |         |        |             |   |   |                       |
| 320000                   | CC-2101-HL5005<br>RR    | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -                     |
| <u>24-CC-2101-WA3-D</u>  |                         |         |        |             |   |   |                       |
| 320100                   | CC-2101-HL5001<br>GUIDE | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -                     |
| 320200                   | CC-2101-HL5002<br>GUIDE | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -                     |
| <u>24-CC-2101-WA3-E</u>  |                         |         |        |             |   |   |                       |
| 320300                   | CC-2101-SH06<br>RR      | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -                     |
| <u>24-CC-2102-WA3-R</u>  |                         |         |        |             |   |   |                       |
| 320500                   | CC-2102-HL5001<br>RR    | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -                     |
| 320600                   | CC-2102-RR06<br>RR      | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -                     |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2RE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 3 COMPLETED COMPONENTS

PAGE: 12

COMPONENT COOLING 3

| SUMMARY EXAMINATION AREA |                        |        |              | ASME        | M      | O         |                       |   |   |
|--------------------------|------------------------|--------|--------------|-------------|--------|-----------|-----------------------|---|---|
|                          |                        |        |              | SEC. XI     | O      | G         | T                     |   |   |
|                          |                        |        |              | CATGY       | EXAM   | R         | E                     | H |   |
|                          |                        |        |              | ITEM NO     | METHOD | PROCEDURE | E                     | O | E |
| NUMBER                   | IDENTIFICATION         |        |              |             |        |           | C                     | M | R |
|                          |                        |        |              |             |        |           | REMARKS               |   |   |
|                          |                        |        |              |             |        |           | **CALIBRATION BLOCK** |   |   |
| <u>20-CC-2109-WA3-H</u>  |                        |        |              |             |        |           |                       |   |   |
| 326700                   | CC-2109-RH02<br>RR     | PIPING | VT-3         | NDEP 9.2 R0 | X      | -         | -                     |   |   |
| 326800                   | CC-2109-RR03<br>RR     | PIPING | VT-3         | NDEP 9.2 R0 | X      | -         | -                     |   |   |
| <u>16-CC-2103-WA3-H</u>  |                        |        |              |             |        |           |                       |   |   |
| 331700                   | CC-2103-HL5002<br>RR   | PIPING | VT-3         | NDEP 9.2 R0 | X      | -         | -                     |   |   |
| 331800                   | CC-2103-HL5003<br>RR   | PIPING | VT-3         | NDEP 9.2 R0 | X      | -         | -                     |   |   |
| <u>16-CC-2103-WA3-J</u>  |                        |        |              |             |        |           |                       |   |   |
| 332000                   | CC-2103-SH13<br>RR     | PIPING | VT-3         | NDEP 9.2 R0 | X      | -         | -                     |   |   |
| <u>16-CC-2103-WA3-K</u>  |                        |        |              |             |        |           |                       |   |   |
| 332100                   | CC-2103-HL5001<br>SH-V | PIPING | VT-3<br>VT-4 | NDEP 9.2 R0 | X      | -         | -                     |   |   |
| <u>16-CC-2105-WA3-J</u>  |                        |        |              |             |        |           |                       |   |   |
| 334000                   | CC-2105-RR02<br>GUIDE  | PIPING | VT-3         | NDEP 9.2 R0 | X      | -         | -                     |   |   |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2RED2  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 3 COMPLETED COMPONENTS

PAGE: 13

COMPONENT COOLING 3

|                          |                |         |        | N           | O | REMARKS |
|--------------------------|----------------|---------|--------|-------------|---|---------|
|                          |                |         |        | O           | G |         |
|                          |                |         |        | R           | E |         |
|                          |                |         |        | E           | O |         |
| SUMMARY EXAMINATION AREA | SEC. XI        | CATGY   | E-AM   | E           | O | E       |
| NUMBER                   | IDENTIFICATION | ITEM NO | METHOD | PROCEDURE   | C | M       |
|                          |                |         |        | R           |   |         |
| *****                    |                |         |        |             |   |         |
| <u>16-CC-2109-WA3-B</u>  |                |         |        |             |   |         |
| 336500                   | CC-2109-RH12   | PIPING  | VT-3   | NDEP 9.2 R0 | X | -       |
|                          | RR             | -       |        |             | - | -       |
| <u>16-CC-2109-WA3-C</u>  |                |         |        |             |   |         |
| 336600                   | CC-2109-RR11   | PIPING  | VT-3   | NDEP 9.2 R0 | X | -       |
|                          | RR             | -       |        |             | - | -       |
| <u>16-CC-2109-WA3-D</u>  |                |         |        |             |   |         |
| 336700                   | CC-2109-HL5003 | PIPING  | VT-3   | NDEP 9.2 R0 | X | -       |
|                          | RR             | -       |        |             | - | -       |
| 336800                   | CC-2109-HL5004 | PIPING  | VT-3   | NDEP 9.2 R0 | X | -       |
|                          | RR             | -       |        |             | - | -       |
| 336900                   | CC-2109-HL5007 | PIPING  | VT-3   | NDEP 9.2 R0 | X | -       |
|                          | RR             | -       |        |             | - | -       |
| <u>10-CC-2115-WA3-V</u>  |                |         |        |             |   |         |
| 355100                   | CC-2115-RR05   | PIPING  | VT-3   | NDEP 9.2 R0 | X | -       |
|                          | RR             | -       |        |             | - | -       |
| 355200                   | CC-2115-RR06   | PIPING  | VT-3   | NDEP 9.2 R0 | X | -       |
|                          | RR             | -       |        |             | - | -       |

DATE: 02/06/92  
REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
INSERVICE INSPECTION SUMMARY - COM/ SUPPORTS ZRE02  
FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
CLASS 3 CORRELATED COMPONENTS

PAGE: 14

## COMPONENT COOLING 3

| SUMMARY EXAMINATION AREA |  |  |  | N                     | O |
|--------------------------|--|--|--|-----------------------|---|
| ASME                     |  |  |  | O                     | D |
| SEC. XI                  |  |  |  | R                     | F |
| CATGY EXAM               |  |  |  | E                     | O |
| ITEM NO METHOD PROCEDURE |  |  |  | C                     | M |
|                          |  |  |  | R                     | E |
|                          |  |  |  | REMARKS               |   |
|                          |  |  |  | **CALIBRATION BLOCK** |   |

10-CC-2115-WA3-Y

|        |              |        |      |             |   |   |   |
|--------|--------------|--------|------|-------------|---|---|---|
| 355300 | CC-2115-NR07 | PIPING | VT-3 | NDEP 9.2 RO | X | - | - |
|        | RR           | -      |      |             |   |   |   |

10-CC-2115-WA3-W

|        |              |        |      |             |   |   |   |
|--------|--------------|--------|------|-------------|---|---|---|
| 255500 | CC-2115-RR03 | PIPING | VT-3 | NDEP 9.2 R0 | X | - | - |
|        | RR           | -      |      |             |   |   |   |



DATE: 02/06/92  
 REVISION: 0

SOUTH TEXAS PROJECT UNIT 2  
 INSERVICE INSPECTION SUMMARY - COMP SUPPORTS 2RE02  
 FIRST INTERVAL, FIRST PERIOD, SECOND OUTAGE (91RF)  
 CLASS 3 COMPLETED COMPONENTS

PAGE: 15

ESSENTIAL COOLING WATER 3

| SUMMARY EXAMINATION AREA |                | ASME    |        |             | N | O |                       |
|--------------------------|----------------|---------|--------|-------------|---|---|-----------------------|
|                          |                | SEC. XI |        |             | O | G | I                     |
|                          |                | CATGY   | EXAM   |             | Q | E | H                     |
|                          |                | ITEM NO | METHOD | PROCEDURE   | E | O | E                     |
| NUMBER                   | IDENTIFICATION |         |        |             | C | M | R                     |
|                          |                |         |        |             |   |   | REMARKS               |
|                          |                |         |        |             |   |   | **CALIBRATION BLOCK** |
| -----                    |                |         |        |             |   |   |                       |
| 30-EW-2105-WT3-A         |                |         |        |             |   |   |                       |
| 380000                   | EW-2105-HL5003 | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -                     |
|                          | RR             |         |        |             |   |   |                       |
| 6-EW-2106-WT3-A          |                |         |        |             |   |   |                       |
| 419500                   | EW-2106-HL5001 | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -                     |
|                          | GUIDE          |         |        |             |   |   |                       |
| 419600                   | EW-2106-HL5002 | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -                     |
|                          | GUIDE          |         |        |             |   |   |                       |
| 419800                   | EW-2106-HL5006 | PIPING  | VT-3   | NDEP 9.2 RD | X | - | -                     |
|                          | GUIDE          |         |        |             |   |   |                       |

APPENDIX 4-B

PERSONNEL

# APPENDIX 4-B

## PERSONNEL

| <u>Name</u>    | <u>Company</u> | <u>Level</u> |
|----------------|----------------|--------------|
| R. S. Givens   | HL&P           | II           |
| O. J. Cannon   | HL&P           | I            |
| S. E. McLeod   | HL&P           | III          |
| M. D. Martin   | HL&P           | II           |
| R. L. Maxwell  | HL&P           | II           |
| R. P. Mumme    | HL&P           | II           |
| C. A. Murry    | HL&P           | II           |
| P. Silva       | HL&P           | II           |
| L. D. Spiess   | HL&P           | II           |
| D. A. Stuhler  | HL&P           | II           |
| C. D. Suhler   | HL&P           | II           |
| A. R. Pennanen | NES            | II           |

### Company

HL&P - Houston Lighting & Power Company

NES - Nuclear Energy Services

APPENDIX 4-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 2 4. Owner and Certificate of Authorization (if required) N.A.
5. Commercial Service Date 06/19/89 6. National Board Number for Unit N.A.
7. Components Inspected ASME Code Class 1 Component Supports - Piping and Equipment  
(See Page 3 of 3 for Identification Numbers)

[illegible]HL&P ☒

R. L. Beverly

Date \_\_\_\_\_

2/26/92

### Factory Mutual by-System

B. R. Russell, ANU

Date \_\_\_\_\_

36 42

## FORM NIS-1 (Back)

8. Examination Dates 10/30/91 to 11/12/91 9. Inspection Interval from 06/19/89 to 06/19/99
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 4.4 and Appendix 4-A of 2RE02 Summary Report for list of examinations performed.  
The examinations performed this outage constitute 21 percent of the required examinations for the current interval.
11. Abstract of Conditions Noted.  
None.
12. Abstract of Corrective Measures Recommended and Taken.  
None.

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 FEB 26 19 92 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 7-18-91 to 3-6-92, 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  
Inspector's Signature Tex 826  
B. R. Russell National Board, State, Province, and Endorsements

Date 3-6-19 92

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

## ASME Code Class 1 Component Supports

1. Owner Horton 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 2 4. Owner and Certificate of Authorization (if required) N.A.
5. Commercial Service Date 06/19/89 6. National Board Number for Unit N.A.

| <u>PIPING SUPPORT MARK NO.</u> | <u>TYPE</u> |
|--------------------------------|-------------|
| CV-2121-HS5008                 | RR          |
| RC-2123-RR13                   | RR          |
| RC-2123-RR14                   | RR          |
| RH-2208-HL5005                 | SH-V        |

| <u>EQUIPMENT SUPPORT MARK NO.</u> | <u>DESCRIPTION</u> |
|-----------------------------------|--------------------|
| RPR3B                             | RC PUMP RODS       |

HL&P by R. L. Beverly  
R. L. Beverly

Date 2/26/92

Factory Mutual by B. R. Russell  
System

B. R. Russell, ANII

Date 3-6-92

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

5. Commercial Service Date 06/19/89 6. National Board Number for Unit N.A.

7. Components Inspected ASME Code Class 2 Component Supports - Piping and Equipment  
(See Page 3 of 3 for Identification Numbers)

[illegible]

HL&P by R. L. Beverly Date 2/26/92 Factory Mutual by B. R. Russell, ANII Date 3-6-92



## FORM NIS-1 (Back)

8. Examination Dates 08/20/91 to 10/12/91 9. Inspection Interval from 06/19/89 to 06/19/99
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 and Equipment)  
See Section 4.4 and Appendix 4-A of 2RE02 Summary Report for list of examinations performed.  
The examinations performed this outage constitute 27 percent of the required examinations for the current interval.
11. Abstract of Conditions Noted.  
None.
12. Abstract of Corrective Measures Recommended and Taken.  
None.

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 FEB. 26 1992 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 7-18-91 to 3-6-92, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in the 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  
Inspector's Signature Tex 826  
B. R. Russell National Board, State, Province, and Endorsements

Date 3-6- 19 92

**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 2 4. Owner and Certificate of Authorization (if required) N.A.
5. Commercial Service Date 06/19/89 6. National Board Number for Unit N.A.

| <u>PIPING SUPPORT MARK NO.</u> | <u>TYPE</u> |
|--------------------------------|-------------|
| AF-2012-HL5021                 | GUIDE       |
| AF-2012-HL5016                 | SH-V        |
| CS-2302-HL5004                 | RR          |
| RH-2103-SH10                   | SH-V        |
| RH-2103-SH08                   | SH-V        |
| RH-2103-RR07                   | GUIDE       |
| RH-2104-RR02                   | RR          |
| RH-2104-RR03                   | RR          |
| SI-2101-HL5021                 | SH-V        |
| SI-2101-HL5018                 | RR          |
| SI-2101-HL5022                 | RR          |
| SI-2101-HL5020                 | RR          |
| SI-2101-HL5024                 | RR          |
| SI-2101-HL5025                 | RR          |
| SI-2101-HL5019                 | RR          |
| SI-2101-RR20                   | RR          |
| SI-2101-SH14                   | GUIDE       |
| SI-2102-RR03                   | RR          |
| SI-2102-RR04                   | RR          |
| SI-2102-RR08                   | GUIDE       |
| SI-2139-HF5002                 | U-BOLT      |

HL&P by R. L. Beverly

Date 2/26/92

Factory Mutual by B. R. Russell  
System

B. R. Russell, ANII

Date 3-6-92



## FORM NIS-1 (Back)

8. Examination Dates 08/16/91 to 12/15/91 9. Inspection Interval from 06/19/89 to 06/19/99

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 4.4 and Appendix 4-A of 2RE02 Summary Report for list of examinations performed.  
The examinations performed this outage constitute 24 percent of the required examinations for the current interval.

11. Abstract of Conditions Noted.

Nonconforming conditions were noted on one (1) support: AF-2011-HL5006 - loose nuts on pipe clamp.

12. Abstract of Corrective Measures Recommended and Taken.

AF-2011-HL5006 was reworked to tighten the loose nuts. Evaluation of the support determined that operability of the support was not affected.

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 FEB. 26 1992 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 1-18-91 to 3-6-92, 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  
Inspector's Signature Tex 826  
B. R. Russell National Board, State, Province, and Endorsements

Date 3-6-1992

**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 2 4. Owner and Certificate of Authorization (if required) N.A.
5. Commercial Service Date 06/19/89 6. National Board Number for Unit N.A.

| <u>PIPING SUPPORT MARK NO.</u> | <u>TYPE</u> |
|--------------------------------|-------------|
| AF-2011-HL5005                 | GUIDE       |
| AF-2011-HL5004                 | GUIDE       |
| AF-2011-HL5006                 | RR          |
| AF-2011-HL5003                 | GUIDE       |
| AF-2011-HL5002                 | GUIDE       |
| CC-2101-HL5004                 | RR          |
| CC-2101-HL5005                 | RR          |
| CC-2101-HL5001                 | GUIDE       |
| CC-2101-HL5002                 | GUIDE       |
| CC-2101-SH06                   | RR          |
| CC-2102-HL5001                 | RR          |
| CC-2102-RR06                   | RR          |
| CC-2109-RH02                   | RR          |
| CC-2109-RR03                   | RR          |
| CC-2103-HL5002                 | RR          |
| CC-2103-HL5003                 | RR          |
| CC-2103-SH13                   | RR          |
| CC-2103-HL5001                 | SH-V        |
| CC-2105-RR02                   | GUIDE       |
| CC-2109-RH12                   | RR          |
| CC-2109-RR11                   | RR          |
| CC-2109-HL5003                 | RR          |
| CC-2109-HL5004                 | RR          |
| CC-2109-HL5007                 | RR          |
| CC-2115-RR05                   | RR          |
| CC-2115-RR06                   | RR          |
| CC-2115-RR07                   | RR          |
| CC-2115-RR03                   | RR          |
| EW-2105-HL5003                 | RR          |
| EW-2188-HL5001                 | GUIDE       |
| EW-2188-HL5002                 | GUIDE       |
| EW-2188-HL5008                 | GUIDE       |

HL&P by R. L. Beverly

Date 2/26/92

Factory Mutual by B. R. Russell

Date 3-6-92