

The Light company

Houston Lighting & Power

South Texas Project Electric Generating Station P. O. Box 289 Wadsworth, Texas 77483

May 11, 1989

ST-HL-AE-3084

File No.: T3.1

10CFR50

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project Electric Generating Station
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Preservice Inspection Program
Relief Request; RR-ENG-08 and RR-ENG-09

Reference: 1. Telephone Conference Call, April 20, 1989
G. Dick (NRC), G. Johnson (NRC), B. Brown (EG&G-Idaho),
and R. Beverly (HL&P)

As discussed in the above reference on April 20, 1989 enclosed are requests for relief (RR-ENG-08 and RR-ENG-09) from ASME Section XI inservice inspection (ISI) requirements for your review and approval. These requests for relief have been previously submitted for relief from ASME Section XI preservice inspection (PSI) requirements (as RR-ENG-03 and RR-ENG-06 respectively) and have been approved by the NRC. These are the only requests for relief that are anticipated to be applicable for the ISI of STPEGS Units 1 & 2.

If you should have any questions on this matter, please contact Mr. A. W. Harrison at (512) 972-7298.

MA McBurnett

M. A. McBurnett
Manager,
Operations Support Licensing

SDP/hg

Attachments: 1) Relief Request No. RR-ENG-08
2) Relief Request No. RR-ENG-09

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South Texas Project Electric Generating Station

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Revised 12/21/88

HOUSTON LIGHTING AND POWER COMPANY
SOUTH TEXAS ELECTRIC GENERATING STATION
UNITS 1 AND 2
DOCKET NOS. STN 50-498, STN 50-499
REQUEST FOR RELIEF FROM ASME BOILER AND
PRESSURE VESSEL CODE, SECTION XI REQUIREMENTS
RELIEF REQUEST NO. RR-ENG-08

Reference Code: ASME Boiler and Pressure Vessel Code, Section XI,
1983 Edition through Summer 1983 Addenda

I. Components for Which Exemption is Requested:

- (a) Name and Identification Number: Steam generator, main steam nozzle, inside radius section examination.
- (b) Function: See Section 10.3 of the STPEGS FSAR.
- (c) Class: ASME Class 2.
- (d) Number of Components: Eight (8) nozzles (one/generator).
- (e) Fabrication NDE: Ultrasonic (UT) and magnetic particle (MT) examination.

II. NDE Requirement for Which Relief is Requested:

Volumetric (i.e., ultrasonic [UT] examination of nozzle inside radius section as required by Table IWC-2500-1, examination category C-B, item number C2.22 of 83S83 Section XI Code.)

III. Basis for Relief Request:

Section XI requires volumetric examination of the inside radius section of nozzles greater than NPS12 in Class 2 vessels to verify their structural integrity. The inside radius section of these nozzles are considered susceptible to flaw initiation and growth due to the high thermal and mechanical stresses associated with the vessel and connected piping systems. In the case of STPEGS steam generator main steam nozzles, the nozzle is a one-piece forging containing a set of seven holes bored parallel to the nozzle centerline. A flow restrictor is installed in each of these holes. Since the ligaments between the holes distribute the stresses throughout the nozzle forging, there is no high-stress, inside radius section for the STPEGS main steam nozzle design. Therefore, the Section XI nozzle inside radius section examination requirements are not applicable to the STPEGS main steam nozzles.

IV. Alternative Examinations:

No alternative examinations are proposed in lieu of the volumetric examination for which relief is requested.

V. Applicability and/or Schedule:

Relief from ASME Section XI ISI examination requirements of volumetric examination of the steam generator main steam nozzle inside radius section is requested for STPEGS-1 and STPEGS-2 for the first 10-year inspection interval.

HOUSTON LIGHTING AND POWER COMPANY
SOUTH TEXAS ELECTRIC GENERATING STATION
UNITS 1 AND 2
DOCKET NOS. STN 50-498, STN 50-499
REQUEST FOR RELIEF FROM ASME BOILER AND
PRESSURE VESSEL CODE, SECTION XI REQUIREMENTS
RELIEF REQUEST NO. RR-ENG-09

Reference Code: ASME Boiler and Pressure Vessel Code, Section XI,
1983 Edition Through Summer 1983 Addenda

I. Components For Which Exemption is Requested:

- (a) Name and Identification Number: Pressurizer support skirt attachment weld for Unit 1 (pressurizer 1A, 1R111NPZ101A) and Unit 2 (pressurizer 2A, 2R111NPZ101A) pressurizers.
- (b) Function: See Section 5.4.10 of the STPEGS FSAR.
- (c) Class: ASME Class 1
- (d) Number of Components: One weld per unit.
- (e) Fabrication NDE: Surface Examination

II. NDE Requirement For Which Relief Is Requested:

Surface (i.e., magnetic particle [MT]) examination of the interior surfaces of the support skirt attachment weld and adjacent base material located inside the pressurizer support skirt.

III. Basis for Relief Request:

ASME Section XI requires that integral attachments to Class 1 vessels be examined by either a surface or volumetric examination method depending on the specific design of the attachment (See Section XI Table IWB-2500-1, Examination Category B-H and Figures IWB-2500-13, -14, and -15). The configuration of the support skirt attachment weld for the STPEGS pressurizers most nearly resembles that of Figure IWB-2500-13 of Section XI (Figure No. 1). This figure requires a surface examination of both the exterior (A-B) and interior (C-D) surfaces of the attachment weld and adjacent base materials. The configuration of the STPEGS pressurizers (See FSAR Figures 5.4-10 and -15) does not permit adequate access to the interior examination area for MT examination. Access to this area is restricted by the pressurizer heaters which are located approximately 13 inches from the inside surface of the support skirt.

IV. Alternative Examinations:

In lieu of the MT examination of the inside surface of the skirt attachment weld, HL&P will perform an ultrasonic (UT) examination from the outside surfaces of the attachment weld and adjacent base materials. The extent of the UT examination coverage is shown on the attached sketch (Figure No. 2). This UT examination provides coverage of the interior surfaces that would have been examined by the internal MT examination. Furthermore, this UT examination provides coverage of the attachment weld and portions of adjacent base material volumes not obtainable by MT examination.

We believe the proposed alternative UT examination provides a level of assurance of structural integrity that is equivalent, if not superior, to that obtainable by an MT examination performed on the interior surfaces of the attachment weld. An MT examination will be conducted on the exterior surfaces of the attachment weld and adjacent base materials (examination surface A-B) in accordance with Section XI.

V. Applicability and/or Schedule:

Relief from ASME Section XI ISI examination requirements is requested for the interior portion of the required MT examination of the support skirt attachment weld for the STREGS-1 and STPEGS-2 pressurizers during the first 10-year inspection interval. An MT examination will be performed on the outside surfaces of the weld and adjacent base materials (as required by Section XI) along with an alternative UT examination as discussed above. These MT and UT examinations will be conducted during the first 10-year inspection interval of ISI on both pressurizers.

RR-ENG-09
Figure No. 1
REQUIREMENTS FOR CLASS 1 COMPONENTS

1983 Edition

Fig. IWB-2500-13

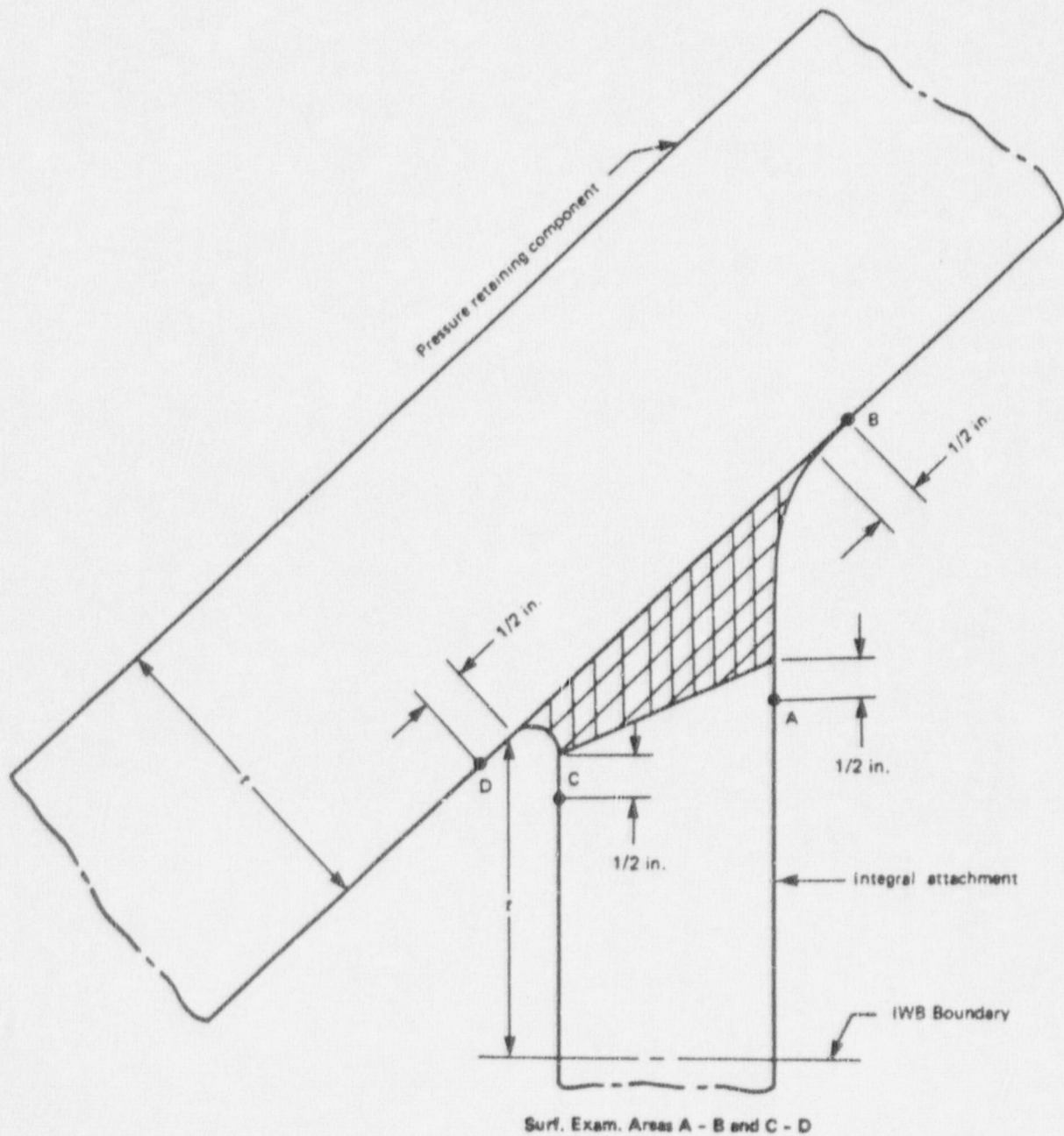


FIG. IWB-2500-13 INTEGRAL ATTACHMENT WELD

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