

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

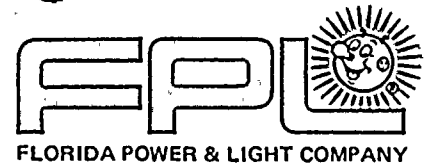
ACCESSION NBR: 8506040348 DOC. DATE: 85/05/31 NOTARIZED: NO DOCKET #
 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
 AUTH. NAME AUTHOR AFFILIATION
 WILLIAMS, J.W. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 VARGA, S.A. Operating Reactors Branch 1

SUBJECT: Forwards addl info re Relief Request 3, concerning
 regenerative HX second insp interval inservice insp. Relief
 from code vol & surface areas required in performance of
 ultrasonic & surface exam requested.

DISTRIBUTION CODE: A047D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 10
 TITLE: OR Submittal: Inservice Inspection/Testing

NOTES: 05000250
 OL: 07/19/72
 OL: 04/14/73 05000251

RECIPIENT			COPIES		RECIPIENT			COPIES	
ID	CODE/NAME		LTTR	ENCL	ID	CODE/NAME	LTTR	ENCL	
NRR	ORB1 BC	01	7	7					
INTERNAL:	ACRS	16	10	10	ADM/LFMB		1	0	
	ELD/HDS4		1	0	NRR/DE/MEB	15	1	1	
	NRR/DE/NTB	14	1	1	NRR/DL/TAPMG		1	1	
	REC FILE	04	1	1	RGN2		1	1	
EXTERNAL:	24X		1	1	LPDR	03	1	1	
	NRC PDR	02	1	1	NSIC	05	1	1	



MAY 31 1985

L-85-218

Mr. S. A. Varga, Chief
Operating Reactors Branch #1
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555


Dear Mr. Varga:

Re: Turkey Point Unit 3 & 4
Docket Nos. 50-250 and 50-251
Second Inspection Interval Inservice Inspection

Attached, as requested by your staff, please find additional information regarding the Regenerative Heat Exchanger's second inspection interval Inservice Inspection.

Should you require additional information on this subject, please contact us.

Very truly yours,

for 
J. W. Williams, Jr.
Group Vice President
Nuclear Energy

JWW/SAV/bc

Attachment

cc: Harold F. Reis
PNS-LI-85-223

8506040348 850531
PDR ADDCK 05000250
Q PDR



A047
11

TURKEY POINT UNITS 3 & 4

SECOND INSPECTION INTERVAL

INSERVICE INSPECTION

RELIEF REQUEST # 3

A. COMPONENT IDENTIFICATION:

- CLASS 1 - REGENERATIVE HEAT EXCHANGER

B. EXAMINATION REQUIREMENTS:

Exam Cat. Item No.

- 1.) B-B B2.51 - VOLUMETRIC EXAMINATION, TO INCLUDE 100% OF THE WELD LENGTH OF CIRCUMFERENTIAL HEAD WELDS.
- 2.) B-B B2.61 - VOLUMETRIC EXAMINATION, TO INCLUDE 100% OF THE LENGTH OF CIRCUMFERENTIAL TUBE SHEET TO SHELL WELD.
- 3.) B-D B3.150 - VOLUMETRIC EXAMINATION TO INCLUDE 100% OF EACH NOZZLE TO VESSEL WELD AND NOZZLE INSIDE RADIUS AREA
B3.160
- 4.) B-H B8.40 - VOLUMETRIC OR SURFACE EXAMINATION TO INCLUDE 100% OF EACH INTEGRALLY WELDED SUPPORT OF ONE EXCHANGER.
- 5.) B-J B9.21 - SURFACE EXAMINATION TO INCLUDE 100% OF WELD SURFACE ON APPROXIMATELY 25% OF THE TOTAL INTERCONNECTING PIPING JOINTS

C. RELIEF REQUESTED

Relief is requested from the code volume and surface areas that are required in the performance of the ultrasonic and surface examination on the Regenerative heat exchanger or vessel, interconnecting piping and support welds.

Item B2.51	HEAD WELDS	PTP-3	3 WELDS	TABLE 1
		PTP-4	3 WELDS	TABLE 1
Item B2.61	SHELL TO TUBESHEET	PTP-3	3 WELDS	TABLE 1
		PTP-4	3 WELDS	TABLE 1
Item B3.150 B3.160	NOZZLE TO SHELL	PTP-3	6 WELDS	TABLE 1
		PTP-4	6 WELDS	TABLE 1
Item B8.40	WELDED SUPPORT	PTP-3	1 WELD	TABLE 1
		PTP-4	1 WELD	TABLE 1

RELIEF REQUEST # 3 CONTINUED

Item B9.21	INTERSTAGE PIPING	PTP-3	6 WELDS	TABLE 1
		PTP-4	6 WELDS	TABLE 1

D. BASIS FOR RELIEF:

Configuration, limited accessibility, high radiation levels, and supports prohibit 100% ultrasonic and surface examination coverage of the required code examination volume and surface area. The limitations and justification for each weld from code examination is discussed below including applicable Tables and Figures.

The amount of associated effort and supporting work to comply with the code requirements is not justified for the following reasons:

- 1) To perform these examinations, large expenditures of manhours and man-rem are required with essentially no compensating increase in plant safety, coupled by the increase in radiation (see figure nos.3 and 4 for comparison in radiation levels from 11-2-82 to 10-9-83 exposure. Additional areas contributing to the justification are as follows: (surveys were taken on Turkey Point 3, verification was made against Turkey point 4, and determined that the surveys in this relief were identical to unit 4.)

- Florida Power & Light Company performed examinations on both Units 3 & 4 heat exchangers during the first and second inspection periods. The coverage and/or the examination limitations are depicted in figure no. 1. (The RGX examination coverage and/or examination limitations.) The regenerative heat exchanger component design arrangement and accessibility are not normally conducive to meaningful examination. (see fig. no. 2 for design configuration)
- Additional temporary shielding must be installed for any examination, except for the visual method. As a consequence, this would reduce the access to the component for examination due to existing space conditions.
- The component has to be uninsulated for examination. Typically, surfaces also have to be conditioned resulting in additional manrem and creating significant cleanliness problems.
- Table no. 1 defines the identification of all Regenerative heat exchanger welds.

RELIEF REQUEST # 3 CONTINUED

The alternate examinations and system pressure tests provides assurance of an acceptable level of quality and safety.

E. ALTERNATIVE EXAMINATION

In lieu of volumetric and surface examinationn perform visual (VT-2 & VT-3) examinations during system pressure tests..

F. IMPLEMENTATION SCHEDULE

- 1) During each refueling outage the following will be performed:
 - a. Perform a visual examination (VT-3) at the beginning of the refueling outage for leakage and boric acid cumulation.
 - b. Prior to return to operation a visual examination (VT-2) will be performed during the system leakage test.
- 2) Perform a visual examination (VT-2) during the system hydrostatic pressure test at or near the end of the inspection interval.

G. ATTACHMENTS

FIGURE NO. 1	EXAMINATION LIMITATIONS
FIGURE NO. 2	DESIGN CONFIGURATION OF REGENERATIVE HEAT EXCHANGER
FIGURE NO. 3	RADIATION SURVEY 1982
FIGURE NO. 4	RADIATION SURVEY 1983
FIGURE CIS-V-11	REGENERATIVE HEAT EXCHANGER SHELL I,II,III
TABLE NO. 1	LIST OF AFFECTED WELDS

REGENERATIVE HEAT EXCHANGER WELD IDENTIFICATION

RELIEF REQUEST NO. 3

TABLE NO. 1

HEAD TO SHELL	SHELL TO TUBE SHEET- PRIMARY	TUBE SHEET TO SHELL- SECONDARY	CHANNEL HEAD WELD SECONDARY
* RGX-(I)-1	* RGX-(I)-2	RGX-(I)-3	RGX-(I)-4
* RGX-(II)-1	* RGX-(II)-2	RGX-(II)-3	RGX-(II)-4
* RGX-(III)-1	* RGX-(III)-2	RGX-(III)-3	RGX-(III)-4

SHELL I

SHELL II

SHELL III

NOZZLE WELDS

* RGX-(I)-9
RGX-(I)-10
* RGX-(I)-11
RGX-(I)-12

* RGX-(II)-9
RGX-(II)-10
* RGX-(II)-11
RGX-(II)-12

* RGX-(III)-9
RGX-(III)-10
* RGX-(III)-11
RGX-(III)-12

NOZZLE TO PIPE INTERSTAGE PIPING

SHELL I

SHELL II

SHELL III

INTEGRALLY WELDED SUPPORTS

* RGX-(I)-7
RGX-(I)-8
RGX-(I)-6
* RGX-(I)-5

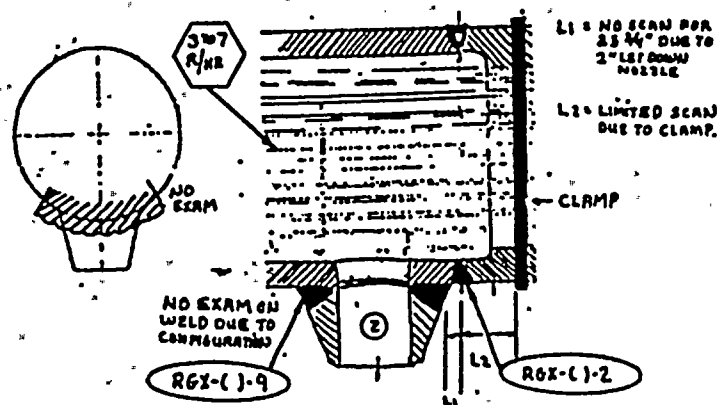
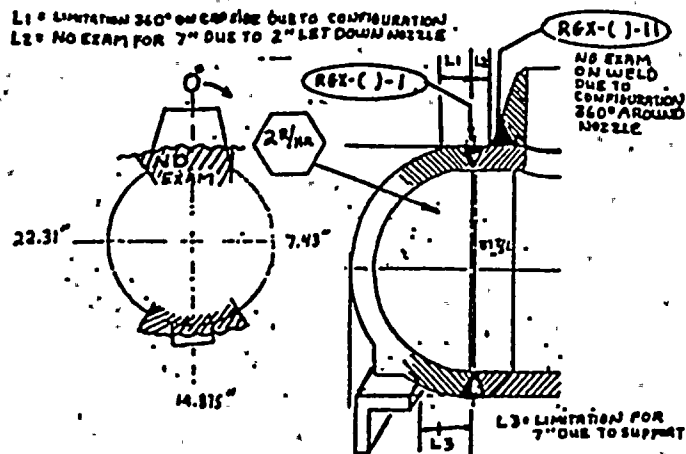
* RGX-(II)-5
RGX-(II)-6
* RGX-(II)-7
RGX-(II)-8

* RGX-(III)-7
* RGX-(III)-5
RGX-(III)-6
RGX-(III)-8

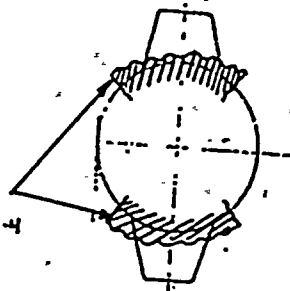
* RGX-(I)-LUG
RGX-(II)-LUG
RGX-(III)-LUG

NOTE * = DENOTES EXAMINATIONS REQUIRED BY CODE

L1 = LIMITATION 360° ON CAP SIDE DUE TO CONFIGURATION
L2 = NO EXAM FOR 7" DUE TO 2" LET DOWN ANGLE



NO EXAM
ROX-()-4



CLAMP

REX-()-3

LIMITATION DUE TO CLAMP.
NO EXAM FOR 14 1/4" DUE TO 3" ANGLE AND 25 1/4" DUE TO 2" ANGLE.

REX-()-10

NO EXAM ON WELD DUE TO ANGLE CONFIGURATION

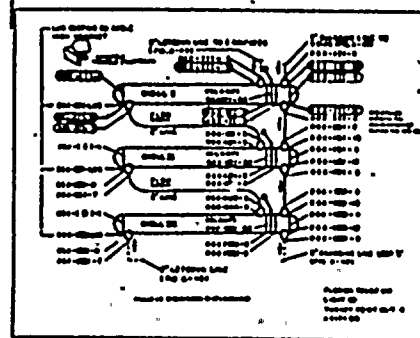
NO EXAM ON WELD DUE TO CONFIGURATION
REX-()-12

REX-()-4

LIMITED SCAN 3/4" ON CAP SIDE DUE TO CONFIGURATION
NO EXAM FOR 14" DUE TO 3" ANGLE AND 25 1/4" DUE TO 2" ANGLE.



RADIATION READINGS IN REM/HOUR AT CONTACT.



TURKEY POINT UNIT-3/4

DATE: 5-30-84	DRAWN BY: E.L. ANDERSON	APPROVED BY:
SCALE: NONE	REVISED	

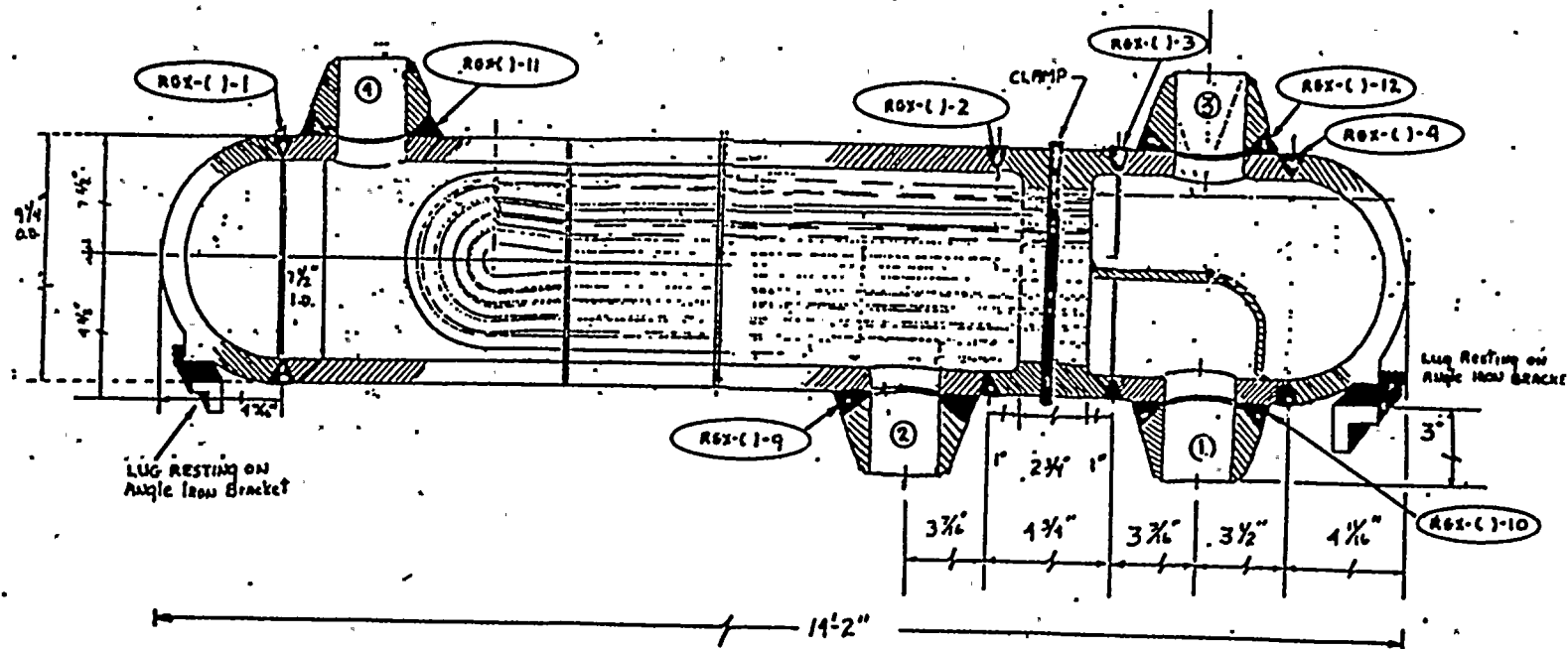
REGENERATIVE HEAT EXCHANGER COVERAGE AND/OR EXAMINATION LIMITATIONS

RELIEF REQUEST NO. 3

DRAWING NUMBER

FIGURE NO. 1

- ① 3" CHARGING LINE
- ② 2" LETDOWN LINE
- ③ 3" CHARGING LINE
- ④ 2" LETDOWN LINE



TURKEY POINT UNIT 3/4

DATE: 5-30-84

DRAWN BY
E.L. ANDERSON

APPROVED BY:

SCALE: NONE

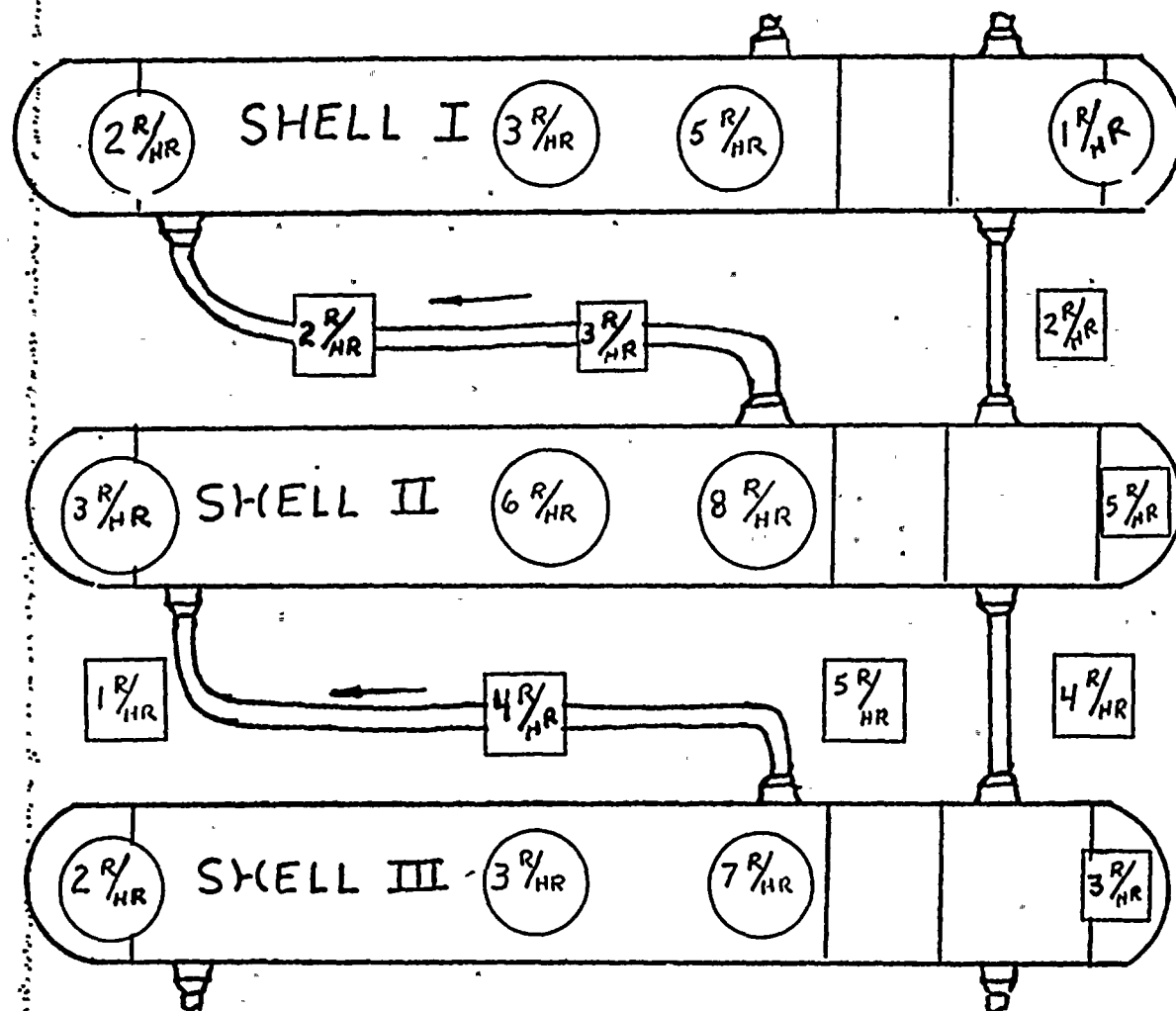
REVISED

REGENERATIVE HEAT EXCHANGER DESIGN AND WELD
IDENTIFICATION DRAWING

RELIEF REQUEST NO. 3

DRAWING NUMBER

FIGURE NO. 2



□ = R/HR AT CONTACT

○ = R/HR AT 18"

TURKEY POINT UNIT 3/4

DATE: 5-30-84

DRAWN BY: E.L. ANDERSON

APPROVED BY:

SCALE: NONE

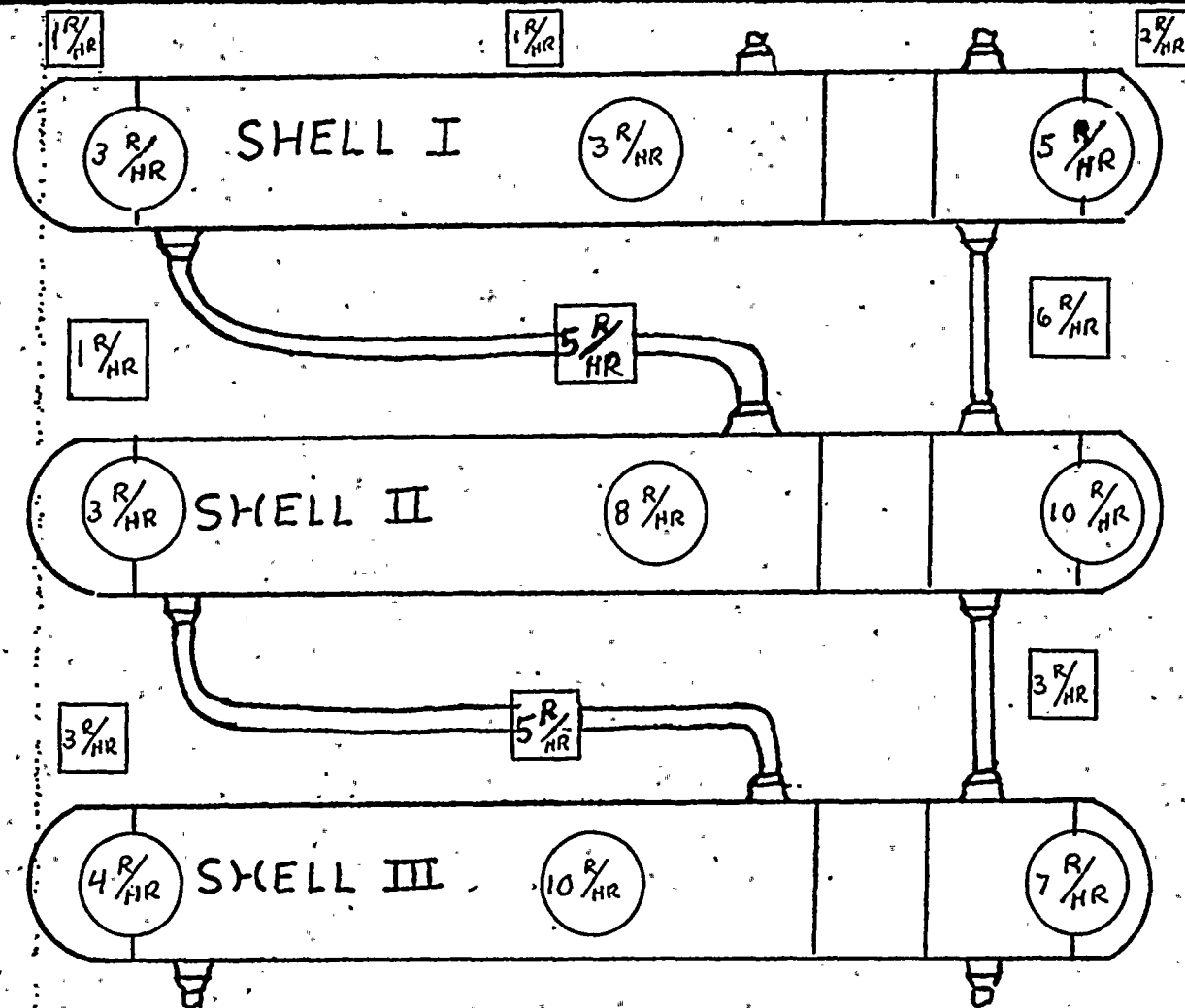
REVISED

REGENERATIVE HEAT EXCHANGER RADIATION SURVEY
AS OF 11/2/82

RELIEF REQUEST NO. 3

DRAWING NUMBER

FIGURE NO. 3



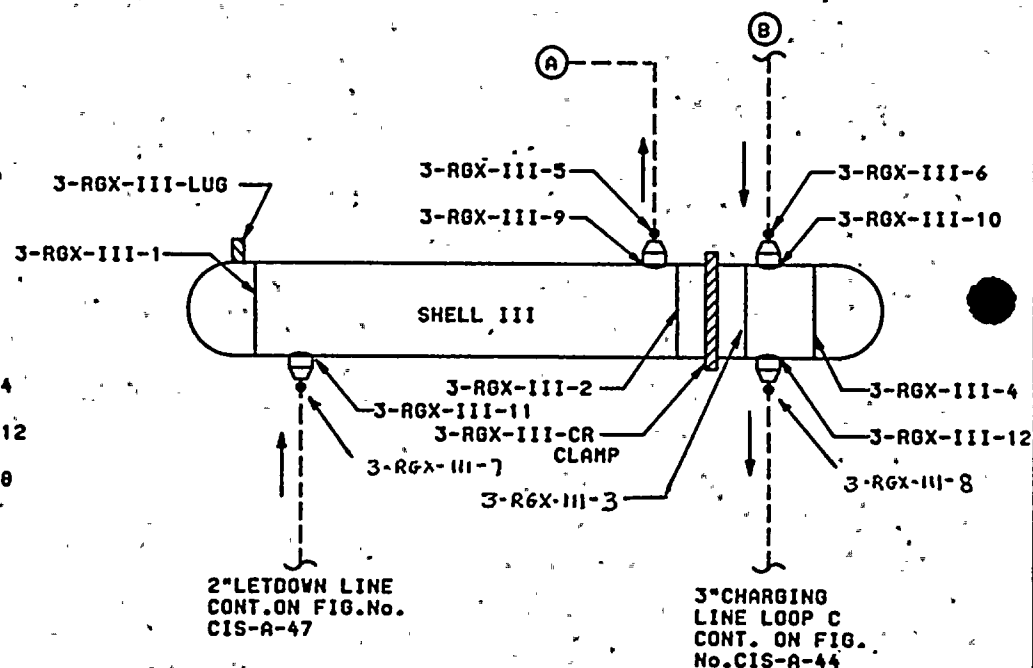
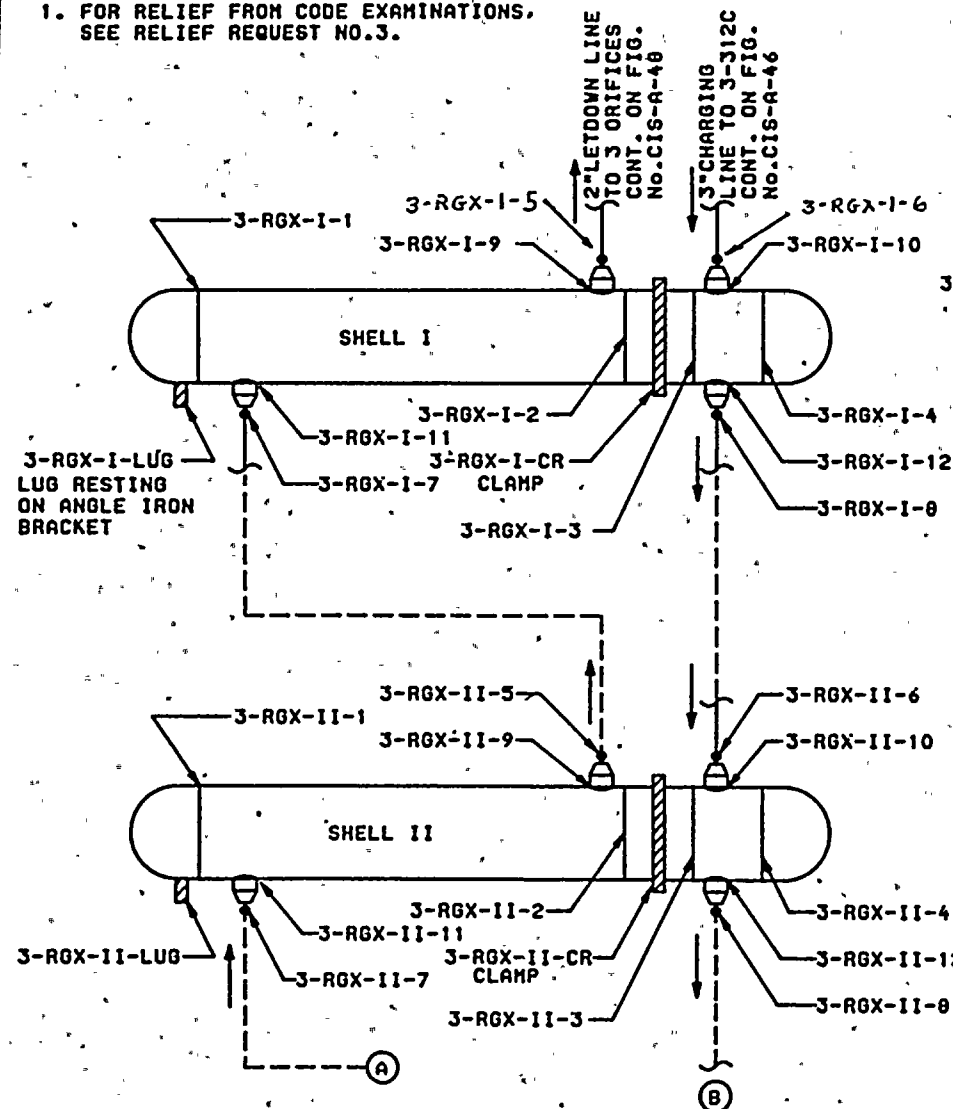
□ = R/HR AT CONTACT

○ = R/HR AT 18"

TURKEY POINT UNIT 3/4

DATE: 5-30-84	DRAWN BY: E.L. ANDERSON	APPROVED BY:
SCALE: NONE	REVISED:	
REGENERATIVE HEAT EXCHANGER RADIATION SURVEY AS OF 10/9/83		
RELIEF REQUEST NO. 3		DRAWING NUMBER FIGURE NO. 4

1. FOR RELIEF FROM CODE EXAMINATIONS,
SEE RELIEF REQUEST NO.3.



CAL. BLOCK IDENTIFICATION

SIZE	MATERIAL	SPECS	TYPE

REFERENCE DRAWING: REV

SENTRY DWG. A04195-A044 8

CODES & INSPECTIONS SECTION
TURKEY POINT UNIT 3

SCALE: NONE	APPROVED BY: <i>J.S. Anderson</i>	DRAWN BY VTD
DATE: 3-7-85		REVISED

REGENERATIVE HEAT EXCHANGER
SHELL I, SHELL II, & SHELL III

FPL	CAD	DRAWING NUMBER	CIS-V-11
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NO	DATE	REVISION	BY	CM	COR	APP	NO	DATE	REVISION	BY	CM	COR	APP
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