

River Bend Station 5485 U.S. Highway 61N St. Francisville, LA 70775 Tel 225-381-4157

> Joseph A Clark Manager, Licensing

RBG-47166

August 3, 2011

U. S. Nuclear Regulatory Commission Attn.: Document Control Desk Washington, DC 20555-0001

SUBJECT: River Bend Station, Unit 1 - Requests for Relief RBS-ISI-016 and RBS-ISI-017 Requests for Relief from ASME Code Section XI Inservice Inspection Requirements for Pressure Retaining Welds in Control Rod Housings and Pressure Retaining Welds in Pumps and Valves Docket No. 50-458 License No. NPF-47

REFERENCES:

- NUREG-0989; "Safety Evaluation Report Related to the Operation of River Bend Station," Supplement 3, Appendix L, Dated May 1984.
- NRC Letter; "River Bend Station Unit 1- Evaluation of Relief Requests For Second Ten-Year Interval Pum and Valve Inservice Testing," Dated March 9, 2000 (TAC No. MA4546)

Dear Sir or Madam:

Pursuant to 10 CFR 50.55a, "Codes and Standards," paragraph (g)(5)(iii), Entergy requests relief from certain American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPV), Section XI, Sub Article IWB-2500 Inservice Inspection (ISI) requirements for Examination Category B-O, Pressure Retaining Welds in Control Rod Housings and Examination Category C-G, Pressure Retaining Welds in Pumps and Valves. This relief is requested for the second 10-year interval of the Inservice Inspection Program for the River Bend Station (RBS).

These requests for relief are being submitted beyond the 12 month timeframe following the second 120 month interval as specified under 10 CFR 50.55a(g)(5)(iv). This condition has been addressed in Entergy's Corrective Action Process.

In accordance with 10 CFR 50.55a(g)(6)(i), the proposed relief to the referenced requirements may be approved by the NRC giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility. Entergy believes full compliance with the ASME Code, Section XI requirements is not practical. The specific details of the requested relief are enclosed in Attachment 1 and Attachment 2.

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The NRC previously granted relief for these examinations in the Safety Evaluations listed as References 1 and 2 above.

There are no new commitments in this letter.

If you have any questions concerning this letter, please contact me at (225) 381-4177.

Respectfully,

Manager, Licensing River Bend Station - Unit 1

JAC/bmb

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Attachments:

1. Attachment 1 - Second 10 Year Interval Inservice Inspection Program Request For Relief - RBS-ISI-016

2. Attachment 2 - Second 10 Year Interval Inservice Inspection Program Request For Relief - RBS-ISI-017

cc: Regional Administrator U. S. Nuclear Regulatory Commission Region IV 612 E. Lamar Blvd., Suite 400 Arlington, TX 76011-4125

> NRC Senior Resident Inspector P. O. Box 1050 St. Francisville, LA 70775

U. S. Nuclear Regulatory Commission Attn: Mr. Alan B. Wang MS O-8 B1 Washington, DC 20555-0001

Department of Environmental Quality Office of Environmental Compliance Radiological Emergency Planning and Response Section JiYoung Wiley P.O. Box 4312 Baton Rouge, LA 70821-4312 RBG-47166 Page 1 of 1

RBG-47166 RBF1-11-0104 File codes; G9.5,

ATTACHMENT 1 TO

RBG-47166

RIVER BEND STATION – UNIT 1 SECOND 10 YEAR INTERVAL INSERVICE INSPECTION PROGRAM

REQUEST FOR RELIEF

RBS-ISI-016

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RIVER BEND STATION – UNIT 1 SECOND 10 YEAR INTERVAL INSERVICE INSPECTION PROGRAM REQUEST FOR RELIEF RBS-ISI-016

Component(s) Affected:	See Table 1 below
Code Class:	ASME Code Class 1
References:	ASME Section XI 1992 Edition, 1993 Addenda, Table IWB-2500-1 Inspection Program B
Examination Category:	B-O, Pressure Retaining Welds in Control Rod Housings
Item Number(s):	B14.10, Welds in CRD Housing
Unit / Inspection Interval Applicability:	River Bend Station (RBS), Second (2nd) 10-year interval December 1, 1997 through May 31, 2008

I. <u>Applicable Code Requirement(s)</u>

ASME Code, Section XI, 1992 Edition, 1993 Addenda, Table IWB-2500-1, Examination Category B-O, Pressure Retaining Welds in Control Rod Housings, Item B14.10 requires volumetric or surface examination of 10% of peripheral CRD housing welds.

II. Impracticality of Compliance

The as-installed configuration of the 36 peripheral CRD housings makes performance of the eight required examinations impractical for the following reasons. The housings are laterally proximate to the reactor vessel support pedestal, which limits access to the upper and lower welds on the outer circumference of the housings. Next, the subject welds are below the lower reactor insulation support structure where the housings pass through a series of closely-spaced CRD housing support beams and associated hanger rods, which further limit access to the welds in the upper portion of the housings. Access to both the upper and lower welds from below is further limited by a series of CRD housing support bars, grid plates and grid clamps. Access to the lower welds from the housing ID requires removal of the CRD mechanisms and sleeves. See Diagrams 1 – 5 on pages 5-9 of this relief request.

III. Proposed Alternatives and Basis of Use

Relief is requested from performing the volumetric or surface examinations on 10% of the peripheral CRD housing welds. The subject welds will continue to receive VT-2 examination with the Reactor Coolant Pressure Boundary (RCPB) system leakage test conducted prior to startup from each refueling outage. Under-vessel Drywell leakage is also monitored during each operational cycle.

IV. Duration of Requested Relief

Relief is requested for the second ISI Interval from December 1, 1997 through May 31, 2008.

V. Precedents

Relief from the subject examinations was previously approved by the NRC Staff for the first ISI Interval as documented in NRC SSER 3, Appendix L following the preservice examination.

RIVER BEND STATION – UNIT 1 SECOND 10 YEAR INTERVAL INSERVICE INSPECTION PROGRAM REQUEST FOR RELIEF RBS-ISI-016								
	TABLE 1 - AFFECTED COMPONENTS							
COMPONENT NO	CATEGORY	ITEM NUMBER	DESCRIPTION					
B13-D008-04/17-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/17-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/21-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/21-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/25-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/25-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/29-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/29-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/33-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/33-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/41-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-04/41-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-08/13-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-08/13-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-08/45-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-08/45-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-12/09-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-12/09-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-12/49-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-12/49-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-16/05-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-16/05-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-16/53-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-16/53-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-20/05-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-20/05-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-20/53-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-20/53-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-24/05-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-24/05-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-24/53-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-24/53-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-28/05-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-28/05-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-28/53-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-28/53-WELD-2	B-O	B14.10	Welds in CRD Housing					
B13-D008-32/05-WELD-1	B-O	B14.10	Welds in CRD Housing					
B13-D008-32/05-WELD-2	B-O	B14.10	Welds in CRD Housing					

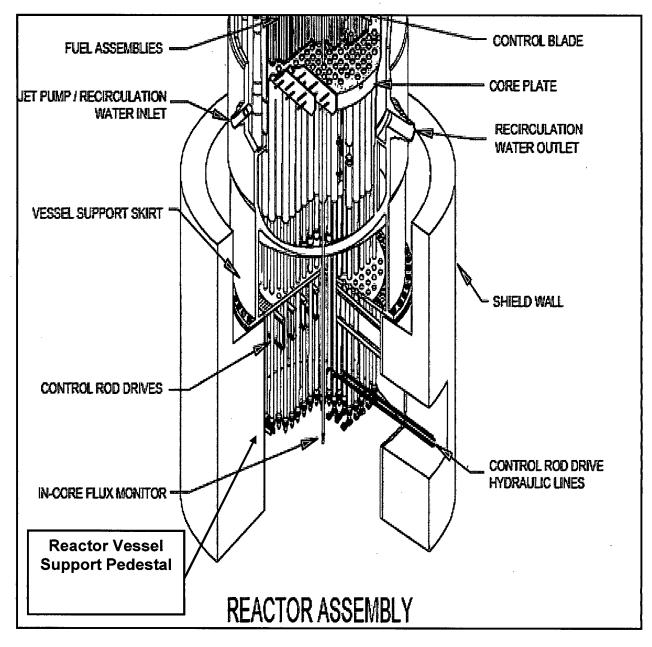
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RIVER BEND STATION – UNIT 1 SECOND 10 YEAR INTERVAL INSERVICE INSPECTION PROGRAM REQUEST FOR RELIEF RBS-ISI-016

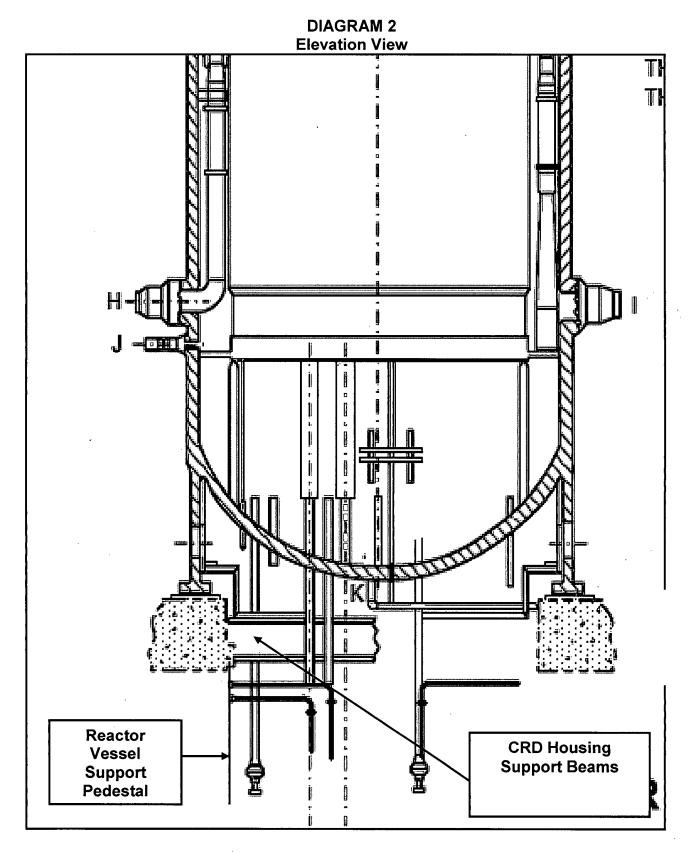
TABLE 1 - AFFECTED COMPONENTS

TABLE I - ATTECTED CONFORENTS					
B13-D008-32/53-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-32/53-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-36/05-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-36/05-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-36/53-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-36/53-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-40/05-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-40/05-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-40/53-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-40/53-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-44/09-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-44/09-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-44/49-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-44/49-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-48/13-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-48/13-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-48/45-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-48/45-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/17-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/17-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/21-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/21-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/25-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/25-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/29-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/29-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/33-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/33-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/37-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/37-WELD-2	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/41-WELD-1	B-O	B14.10	Welds in CRD Housing		
B13-D008-52/41-WELD-2	B-O	B14.10	Welds in CRD Housing		

DIAGRAM 1 General Configuration



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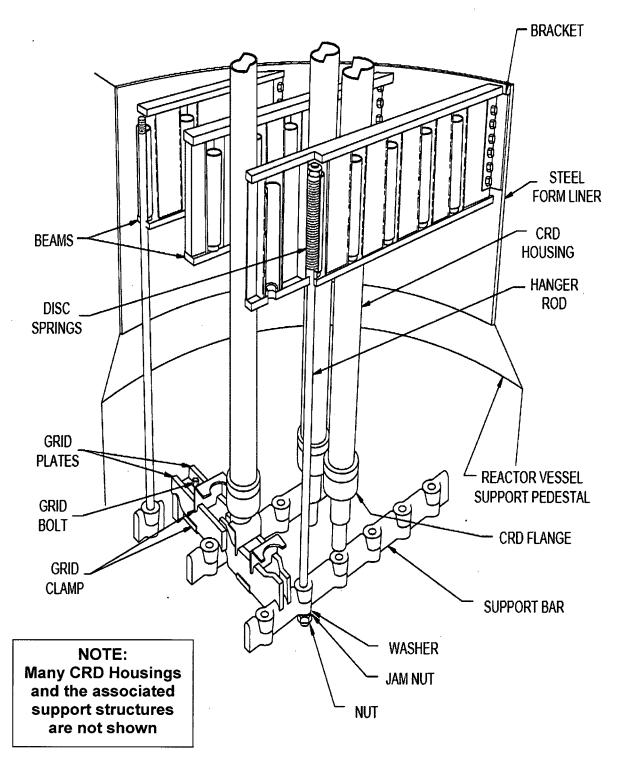


DIAGRAM 3 CRD Housing Support Structures

CONTROL ROD DRIVING HOUSING SUPPORT STRUCTURES

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DIAGRAM 4 CRD Housing Coordinates

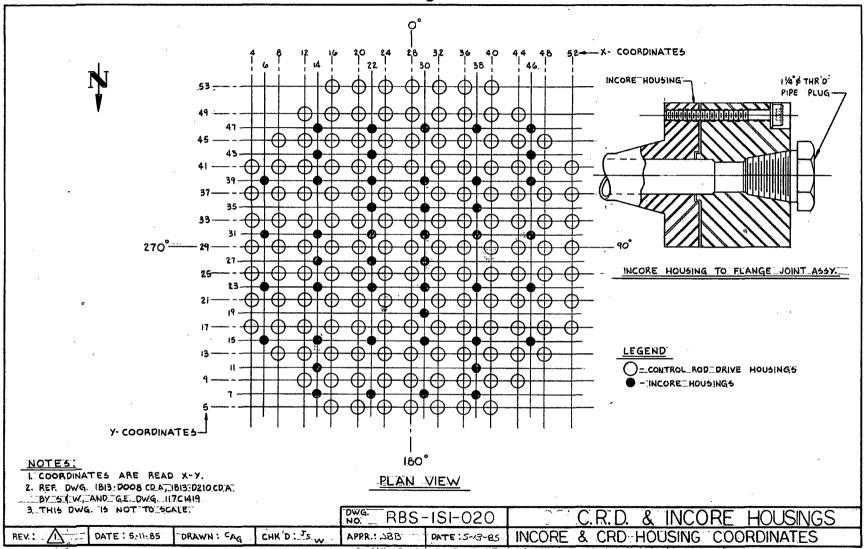
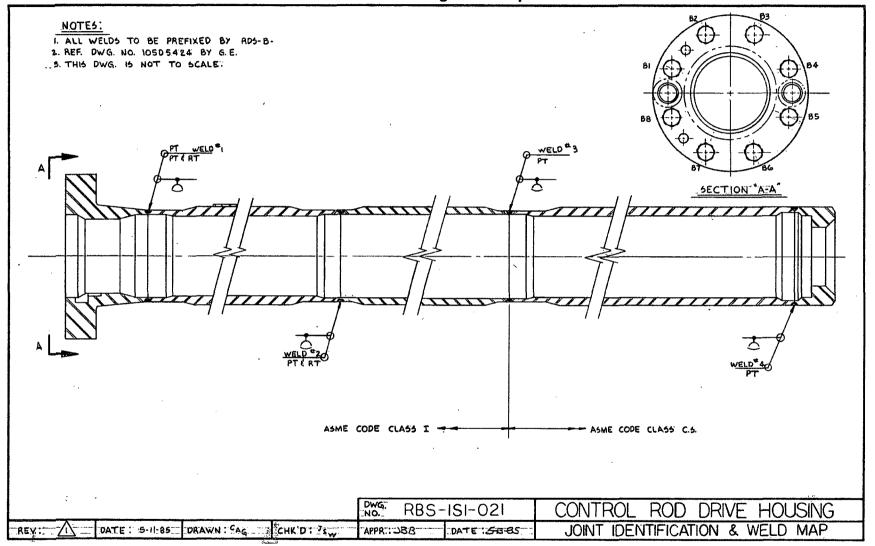


DIAGRAM 5 CRD Housing Weld Map



ATTACHMENT 2 TO

RBG-47166

RIVER BEND STATION – UNIT 1 SECOND 10 YEAR INTERVAL INSERVICE INSPECTION PROGRAM

REQUEST FOR RELIEF

RBS-ISI-017

RIVER BEND STATION – UNIT 1 SECOND 10 YEAR INTERVAL INSERVICE INSPECTION PROGRAM REQUEST FOR RELIEF RBS-ISI-017

Component(s) Affected	See Table 1 below
Code Class:	ASME Code Class 2
References:	ASME Section XI 1992 Edition, 1993 Addenda, Table IWC-2500-1 Inspection Program B
Examination Category:	C-G, Pressure Retaining Welds in Pumps and Valves
Item Number(s):	C6.10, Pump Casing Welds
Unit / Inspection Interval Applicability:	River Bend Station (RBS), Second (2nd)10-year interval December 1, 1997 through May 31, 2008

I. Applicable Code Requirement(s)

ASME Code, Section XI, 1992 Edition, 1993 Addenda, Table IWC-2500-1, Examination Category C-G, Pressure Retaining Welds in Pumps and Valves – Inspection Program B. Item C6.10 requires surface examination of 100% of welds in all components in each piping run examined under Examination Category C-F each inspection interval. For extent of examination, Note 1 applies, where in the case of multiple pumps and valves of similar design, size, function and service in a system, the examination of only one pump and one valve among each group of multiple pumps and valves is required.

II. Impracticality of Compliance

Insufficient access exists to perform the required examination of the subject welds due to the close proximity of twenty-four adjacent nuts/washers that fasten each upper pump casing to the lower (embedded) casing.

III. Proposed Alternatives and Basis for Use

Relief is requested from performing the surface examination of the DH-1 weld as depicted in Diagrams 1-6 for the pumps listed in Table 1 – Affected Components.

The required examinations will be performed if the subject pumps are disassembled for maintenance to the point were the subject welds are accessible. The subject welds will continue to receive VT-2 examinations with the associated system leakage tests. The remaining weld examinations for the subject pumps were either performed or prior relief was approved.

IV. Duration of Requested Relief

Relief is requested for the second ISI Interval from December 1, 1997 through May 31, 2008.

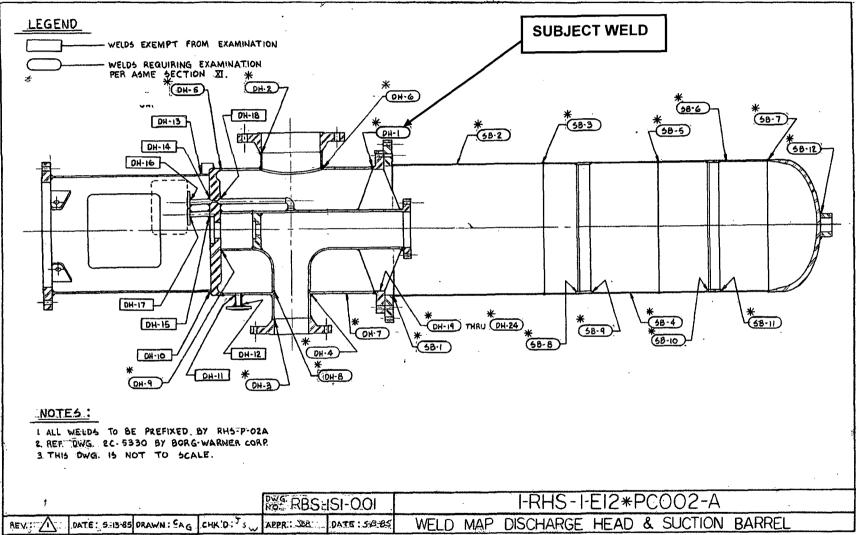
V. Precedents

Relief from the subject examinations was approved by the NRC Staff for the first ISI Interval as documented in NRC SER dated March 9, 2000, which included RR1-0003 revision 3 (TAC No. MA4546).

SECC	OND 10 YEAR II	NTERVAL INS REQUEST I RBS-I	TATION – UNIT 1 SERVICE INSPECTION PROGRAM FOR RELIEF SI-017 TED COMPONENTS	
COMPONENT NO	CATEGORY	ITEM NUMBER	DESCRIPTION	
E12-PC002A-DH-01	C-G	C6.10	Pump Casing Welds	
E21-PC001-DH-01	C-G	C6.10	Pump Casing Welds	
E22-PC001-DH-01	C-G	C6.10	Pump Casing Welds	

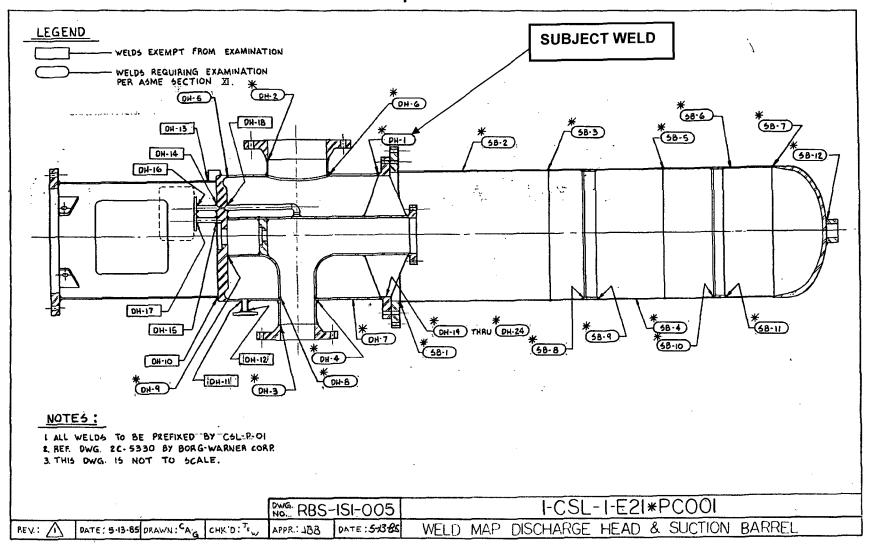
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> **DIAGRAM 1** Pump E12-PC002A



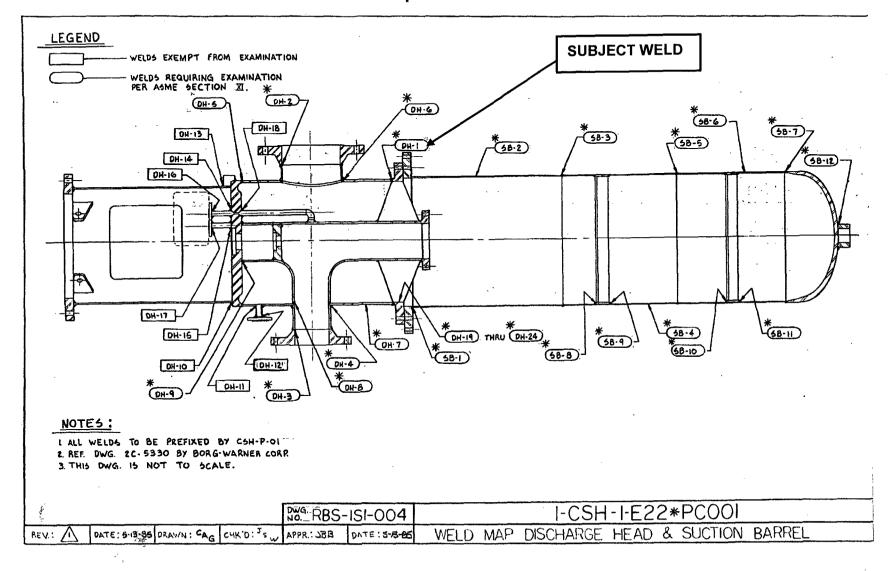
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> DIAGRAM 2 Pump E21-PC001



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> DIAGRAM 3 Pump E22-PC001



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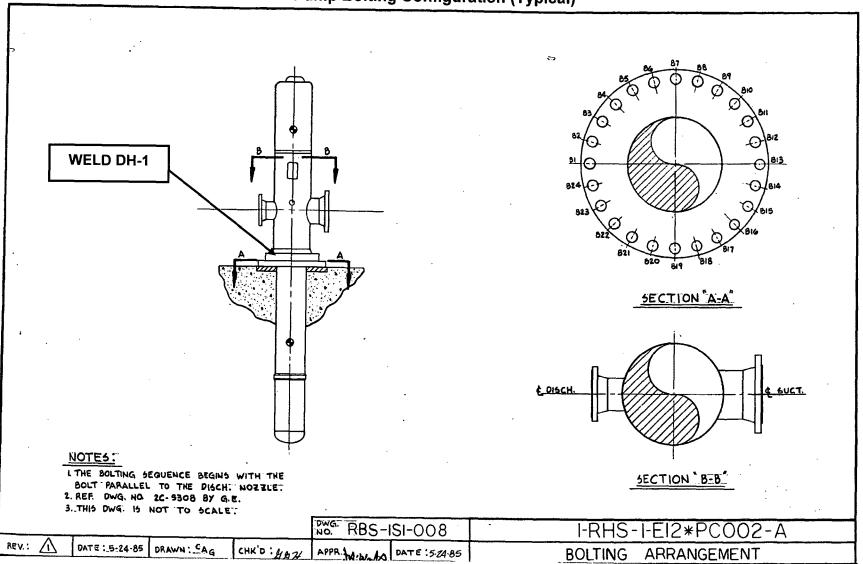


DIAGRAM 4 Pump Bolting Configuration (Typical)

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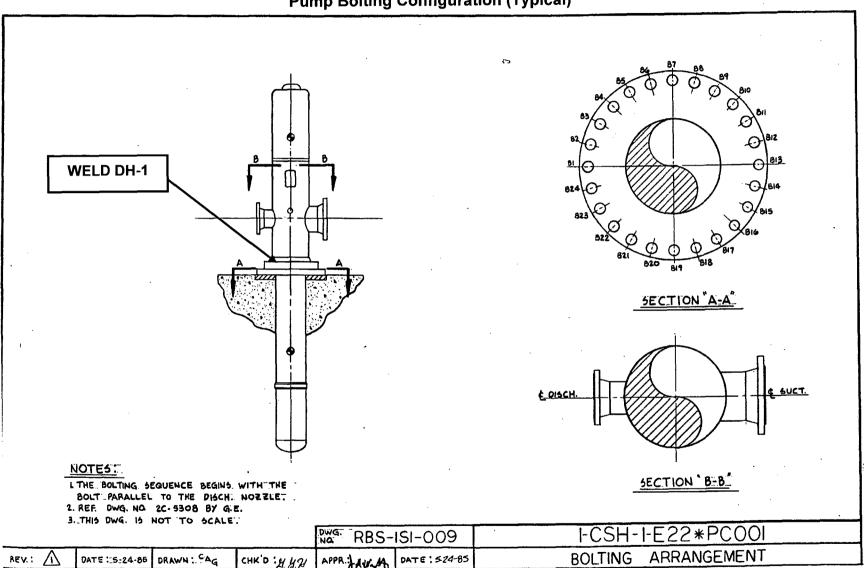


DIAGRAM 5 Pump Bolting Configuration (Typical)

Attachment 2 to RBG-47166 Page 8 of 8

0 WELD DH-1 824 ·O SECTION A-A SUCT. NOTES: L THE BOLTING SEQUENCE BEGINS WITH THE BOLT PARALLEL TO THE DISCH NOTZLE. 2. REF. DWG. NO. 2C-5308 BY G.E. SECTION B-B 3. THIS DWG. IS NOT TO SCALE. DWG. RBS-ISI-010 I-CSL-I-E2I*PCOOI REV.: DATE : 5-24-85 DRAWN : CAG CHK'D : 1 12 APPR : ALLA DATE : 524-85 BOLTING ARRANGEMENT

DIAGRAM 6 Pump Bolting Configuration (Typical)