

July 18, 2003

NG-03-0509  
10 CFR 50.55a

Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station O-P1-17  
Washington, DC 20555-0001

**DUANE ARNOLD ENERGY CENTER  
DOCKET 50-331  
LICENSE No. DPR-49  
INSERVICE INSPECTION REPORT**

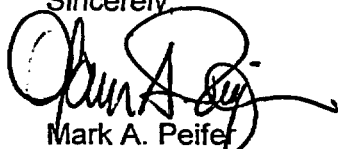
In accordance with the requirements of Paragraph IWA-6230 in Section XI of the ASME Boiler and Pressure Vessel Code and 10 CFR Section 50.55a(g), Nuclear Management Company, LLC (NMC) herewith submits the Refueling Outage (RFO) 18 Inservice Inspection Summary Reports (Attachments 1 and 2). These reports address examinations which were performed at the Duane Arnold Energy Center (DAEC) during the time period from May 28, 2001 through April 20, 2003.

Attachment 3 provides information regarding augmented inservice inspections performed during RFO 18. These inspections include those performed for NUREG-0313, Revision 2, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping," NUREG-0619, "BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking," and Bulletin 80-13, "Cracking in Core Spray Spargers."

NMC's review of the inspection reports has determined that all examined items are acceptable. These inspection reports are on file and are available for review upon request.

This letter contains no new commitments.

Sincerely,



Mark A. Peifer  
Site Vice President, Duane Arnold Energy Center

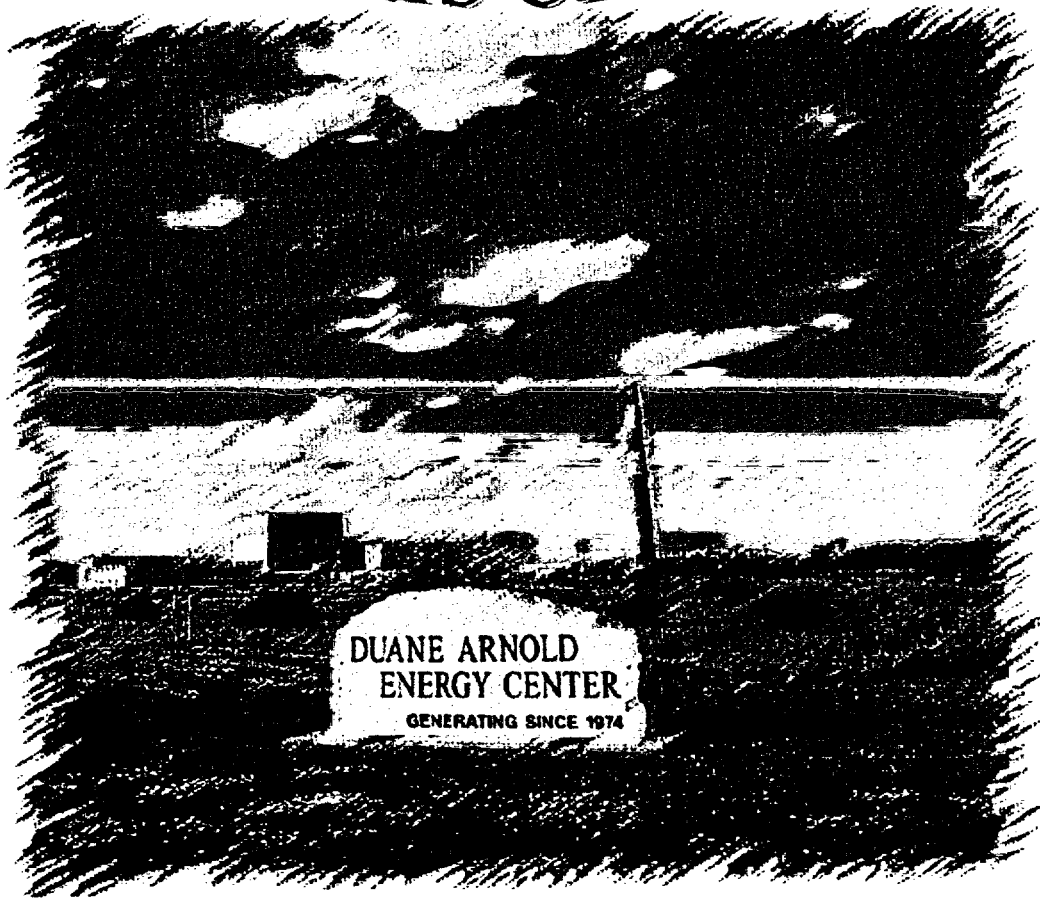
Attachments    1. ASME Section XI Summary Report, Duane Arnold Energy Center, Refueling Outage 18 (Period 2)  
                     2. ASME Section XI Summary Report, Duane Arnold Energy Center, Refueling Outage 18 (Period 3)  
                     3. Augmented Inspection Results RFO 18

CC. Regional Administrator, USNRC, Region III  
Project Manager (DAEC)  
NRC Resident Inspector (DAEC)

A047

**Attachment 1 to NG-03-0509  
ASME Section XI Summary Report  
Duane Arnold Energy Center  
Refueling Outage 18 (Period 2)**

25 Years of



Rock Solid Performance

***ASME Section XI Summary Report***

***Duane Arnold Energy Center***

***Refueling Outage 18***

***(Period 2)***

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
May 28, 2001 through April 20, 2003

**DUANE ARNOLD ENERGY CENTER**

**UNIT #1 PALO, IOWA**

**Commercial Service Date: February 1, 1975**

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION SUMMARY REPORT**

**May 28, 2001 through April 20, 2003**

**Dated: April 20, 2003**

**OWNER:**

**ALLIANT ENERGY**

**P.O. Box 351**

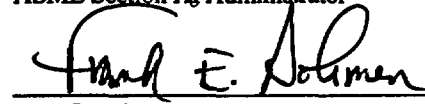
**Cedar Rapids, Iowa 52406**

Prepared by:

  
ASME Section XI Administrator

Date: 7/16/2003

Reviewed by:

  
NDE Level III

Date: 7-16-03

Reviewed by:

  
Program Engineering Staff

Date: 2-16-03

Reviewed by:

  
Equipment Reliability Supervisor

Date: 7-16-03

Concurred by:

  
Program Engineering Manager

Date: 7-17-03

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

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## Part A, Page 1 of 2

**1. Owner:** Interstate Power and Light Company, an Alliant Company, P.O. Box 351, Cedar Rapids, IA 52406 \*  
(Name and address of Owner)

2. Plant: Duane Arnold Energy Center, 3277 DAEC Road, Palo, IA 52324  
(Name and Address of Plant)

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

5. Commercial Service Date 02/01/75 6. National Board Number of Unit N/A

**This report includes a Table of Contents (P1), Part A (PP1-2), Part B (PP1-2), Part C (P1), Part D (PP1-2), Part E (P1), Part F (PP1-2), Part G (PP1-68), Part H (P1), Part I (PP1-14), Part J (PP1-4), and Part K (P1).**

[illegible]

(12/82) This form (E00029) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10010

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
May 28, 2001 through April 20, 2003

Part A, Page 2 of 2

**FORM NIS-1 (back)**

8. Examination Dates 5/28/01 to 4/20/03 9. Inspection Interval from 11/01/96 to 11/01/05

10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval.

Refer to Part C, Part D, and Part J.

11. Abstract of Conditions Noted

Refer to Part H.

12. Abstract of Corrective Measures Recommended and Taken

Refer to Part H.

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

Date July 17 2003

Signed Dean Curtland By Dean Curtland - Engineering Director

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

**CERTIFICATE OF INSERVICE INSPECTION**

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Iowa and employed by HSB CT of Hartford CT have inspected the components described in this Owner's Data Report during the period 5/28/01 to 04/20/03, 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 Data Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Data 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.

Date 7-17 2003.

JN  
Inspector's Signature

Commissions NB 123294<sup>NE</sup>, 1496<sup>IA</sup>  
National Board, State, Province and No.

\* Note - Other owners are Central Iowa Power Cooperative and Corn Belt Power Cooperative.

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

**Part B, page 1 of 2**

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**CERTIFICATE OF INSERVICE INSPECTION**

**COMPONENTS EXAMINED:**

**Reactor Pressure Vessel:**

Manufacturer: Chicago Bridge and Iron  
Post Office Box 13308  
Memphis, TN 38113

National Board Number 3663, Mfr. Serial Number 3-4833

Refer to Part A, Page 1, form NIS-1, Owners Data Report for Inservice Inspections.

**Piping :**

Manufacturers, sizes, part numbers and locations are noted and traceable through the piping isometric and piping instrumentation drawings (P&ID). Installation contractor, fabricator, systems P&ID's and Isometric drawings are listed below.

**Constructor :**

Bechtel Power Co.  
P.O. Box 3865  
San Francisco, CA 94119

**Fabricator -**

Southwest Fabricating and Welding Co.  
P.O. Box 9449  
Houston, TX 77011



**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
May 28, 2001 through April 20, 2003

Part B, page 2 of 2

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required) : N/A  | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**CERTIFICATE OF INSERVICE INSPECTION**

**COMPONENTS EXAMINED:**

<b>CLASS 1</b>
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Component	Iso No
Main Steam	1.2-01/-02/-03
Feedwater	1.2-05/-06
Core Spray	1.2-07
High Pressure Coolant Injection	1.2-09
Recirculation Pump 'A' Suction	1.2-19A
Recirculation Manifold 'A' and Risers E,F,G,H	1.2-20
Recirculation Manifold 'B' and Risers A,B,C,D	1.2-22

<b>IVVI</b>
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Component	Iso No
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NO IVVI EXAMINATIONS WERE PERFORMED DURING THE SECOND PERIOD FOR THIS CYCLE.

<b>CLASS 2</b>
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Component	Iso No
High Pressure Coolant Injection	2.2-44/-46

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

Part C, page 1 of 1

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**CERTIFICATE OF INSERVICE INSPECTION**

**ABSTRACT:**

The Inservice Inspection addressed in this report was performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI 1989 Edition, No Addenda, and the Duane Arnold Energy Center Updated Final Safety Analysis Report. The inspections were performed utilizing Non-Destructive Examination Techniques (i.e., UT, PT, MT, etc.). The examinations were conducted during the period of May 28, 2001 through April 20, 2003. The specific details and associated records of the examinations are on file at Duane Arnold Energy Center.

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

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D	Table of Component and Weld Examination Identification Records	Pages 1-2
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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
May 28, 2001 through April 20, 2003

Part D, page 1 of 2

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS**

CLASS 1						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
Main Steam	MSA-J032	I03014	UT	1.2-01	R-I*	Accepted
	MSA-J033	I03015	UT	1.2-01	R-I*	Accepted
	MSA-J034	I03016	UT	1.2-01	R-I*	Accepted
	MSB-J010	I03023	UT	1.2-02	R-I*	Accepted
	MSB-J011	I03044	UT	1.2-02	R-I*	Accepted
	MSC-J010	I03050	UT	1.2-03	R-I*	Accepted
Feedwater	FWA-J014	EC03080	UT	1.2-05	R-I*	Accepted
	FWB-J014	EC03014	UT	1.2-05	R-I*	Accepted
	FWB-J015	EC03014	UT	1.2-05	R-I*	Accepted
	FWC-J030	I03013 & EC03079	UT	1.2-06	R-I*	Accepted
	FWC-J034A	EC03081 & I03012	UT	1.2-06	R-I*	Accepted
Core Spray	CSA-J003	I03017	UT	1.2-07	R-I*	Accepted
High Pressure Coolant Injection	PSA-J006	I03019	UT	1.2-09	R-I*	Accepted
Recirculation Pump 'A' Suction	RCA-J004	I03053	UT	1.2-19A	R-I*	Accepted
	RCA-J005	I03054	UT	1.2-19A	R-I*	Accepted
Recirculation Manifold 'A' and Risers E,F,G,H	RMA-J001	I03041	UT	1.2-20	R-I*	Accepted
	RRE-J005	I03043	UT	1.2-20	R-I*	Accepted
	RRF-J005	I03059	UT	1.2-20	R-I*	Accepted
	RRG-J005	I03058	UT	1.2-20	R-I*	Accepted
	RRG-J007	I03045	UT	1.2-20	R-I*	Accepted
Recirculation Manifold 'B' and Risers A,B,C,D	RRC-J004A	I03057	UT	1.2-22	R-I*	Accepted

\* Risk-Informed process was used.

**CLASS 1 PRESSURE TESTS**

**NO CLASS 1 PRESSURE TESTS WERE PERFORMED DURING THE SECOND PERIOD FOR THIS CYCLE**

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
May 28, 2001 through April 20, 2003

Part D Page 2 of 2

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS**

CLASS 2						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
High Pressure Coolant Injection	HPA-CF053	I03078	UT	2.2-44	R-I*	Accepted
	HPC-CF029	I03082	UT	2.2-46	R-I*	Accepted

\* Risk-Informed process was used.

CLASS 2 PRESSURE TESTS						
Component	Description	ISI Report	Examination	ISI ISO	ASME XI Category	Results

THERE WERE NO CLASS 2 PRESSURE TESTS PERFORMED DURING THE SECOND PERIOD FOR THIS CYCLE

IWE COMPONENTS						
Component	Description	ISI Report	Exam Method	ISI ISO	ASME XI Category	Results

THERE WERE NO IWE COMPONENTS EXAMINED DURING THE SECOND PERIOD FOR THIS CYCLE

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

Part E, page 1 of 1

- 1) Owners: Interstate Power and Light Company,  
an Alliant Company  
P.O. Box 351  
Cedar Rapids, IA. 52406
- Central Iowa Power Cooperative  
Marion, IA.
- Corn Belt Power Cooperative  
Humbolt, IA.
- 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324
- 3) Plant Unit: #1
- 4) Owners Certificate of Authorization (if required) : N/A
- 5) Commercial Service Date: 02/01/75
- 6) National Board Number of Unit: N/A
- Gross Generating Capacity: 614 MWE

**ADDITIONAL EXAMINATION IDENTIFICATION RECORDS**

Class 1					
Component Examined	Previous ISI Report Number	ISI Report Number	Examination	ASME XI Category	Results

NO ADDITIONAL EXAMS WERE PERFORMED DURING THE SECOND PERIOD FOR THIS CYCLE

**SUCCESSIVE EXAMINATION IDENTIFICATION RECORDS**

Class 1					
Component Examined	Previous ISI Report Number	ISI Report Number	Examination	ASME XI Category	Results

NO SUCCESSIVE EXAMS WERE PERFORMED DURING THE SECOND PERIOD FOR THIS CYCLE



**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
May 28, 2001 through April 20, 2003

Part F, page 1 of 2

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**ABSTRACT OF ASME SECTION XI REPAIRS AND REPLACEMENTS**

The repairs and replacements addressed in this report were performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 1992 with the 1992 Addenda (Ref. Relief Request NDE-R015 Rev. 1).

<u>NIS-2 NO.</u>	<u>CLASS</u>	<u>COMPONENT</u>	<u>WORK DOCUMENT</u>	<u>DESCRIPTION</u>
18-02-01	MC	Torus Shell	CWO A50471	Removed arc strikes on Torus Shell.
18-02-04	2	MO1933	CWO A57412	Replaced tack weld between disc and disc nut
18-02-06	2	PSV2102	CWO A50455	Replaced with a new relief valve of different design.
18-03-03	2	HBB-023-SS-220	PWO 1119896	Replaced snubber.
18-03-05	1	DLA-002-SS-006	CWO A62304	Replaced snubber.
18-03-07	2	HBB-023-SS-219	PWO 1119897	Replaced snubber.
18-03-08	2	1S220 (10-27)	PWO 1123629	Replaced CRD Accumulator.
18-03-09	2	XS2618A	PWO 1125013	Replaced SBLC Squib Valve.
18-03-10	2	1S220 (22-11)	PWO 1123631	Replaced CRD Accumulator.
18-03-11	2	1S220 (34-11)	PWO 1123638	Replaced CRD Accumulator.
18-03-12	2	1S220 (10-31)	PWO 1123636	Replaced CRD Accumulator.
18-03-13	2	1S220 (10-11)	PWO 1123635	Replaced CRD Accumulator.
18-03-14	2	1S220 (30-19)	PWO 1123637	Replaced CRD Accumulator.
18-03-15	2	1S220 (26-27)	PWO 1123633	Replaced CRD Accumulator.
18-03-16	2	1S220 (06-19)	PWO 1123630	Replaced CRD Accumulator.
18-03-17	2	1S220 (22-23)	PWO 1123632	Replaced CRD Accumulator.
18-03-18	2	1S220 (10-07)	PWO 1123634	Replaced CRD Accumulator.
18-03-20	2	XS2618B	CWO A61392	Replaced SBLC Squib Valve.
18-03-21	1	DLA-2-H-19	MWO 1125194	Removed and reinstalled spring can hanger support.
18-03-22	1	Main Steam piping	CWO A62689	Removed surface defects caused by nearby construction.
18-03-23	1	Recirculation System Piping	CWO A60684	Replaced flange on recirculation piping.
18-03-24	MC	Drywell	MWO 1121803	Installed lifting lugs on Drywell.
18-03-25	2	V25-0001	CWO A62296	Machined back of disc for clearance.
18-03-28	1	MSRV Pilot Valve	PWO 1119843	Replaced s/n 207 with s/n 218.

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

Part F, page 2 of 2

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**ABSTRACT OF ASME SECTION XI REPAIRS AND REPLACEMENTS (cont.)**

The repairs and replacements addressed in this report were performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 1992 with the 1992 Addenda (Ref. Relief Request NDE-R015 Rev. 1).

<u>NIS-2 NO.</u>	<u>CLASS</u>	<u>COMPONENT</u>	<u>WORK DOCUMENT</u>	<u>DESCRIPTION</u>
18-03-29	1	MSRV Pilot Valve	PWO 1119844	Replaced s/n 201 with s/n 226.
18-03-30	1	MSRV Pilot Valve	PWO 1119845	Replaced s/n 200 with s/n 189.
18-03-31	1	MS Safety Valve	PWO 1119846	Replaced one stud.
18-03-32	1	MSRV Pilot Valve	PWO 1119848	Replaced s/n 176 with s/n 141.
18-03-33	1	MSRV Pilot Valve	PWO 1119849	Replaced s/n 227 with s/n 203.
18-03-34	1	MSRV Pilot Valve	PWO 1119850	Replaced s/n 199 with s/n 202.
18-03-35	1	1P201B Pump Seal	CWO A58727	Replaced pump seal.
18-03-36	1	Rx Head Vent Supports	CWO A57816	Modified pipe supports for operational convenience.
18-03-37	1	V03-0096	CWO A60844	Repaired body-to-bonnet leak

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

**Part G, page 1 of 68**

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required) : N/A  | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**Form NIS-2's**

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

**Part G, page 2 of 68**

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FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 02/28/02  
Name  
P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address
2. Plant Duane Arnold Energy Center Unit 1  
Name  
3277 DAEC Road, Palo, IA 52324 CWO A50471  
Address Repair Organization to P. O. No., Job No., etc.
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Primary Containment (Torus shell)
5. (a) Applicable Construction Code ASME, Section III 19 68 Edition W68 Addenda Code Case.  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Torus Shell (Primary Containment)	Horton Mfg. By Chicago, Bridge & Iron	Contract # 68-2968	N/A	CWO A50471 / SUS 59.00	1971	Repaired	No

7. Description of Work: Repaired Torus shell area by removal of arc strikes left by thermo-couple wire attachment.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐  
Other ☐ Pressure N/A psi Test Temp N/A °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

FORM NIS-2 (Back)

9. Remarks: During an IWE visual examination (P01078) of the torus exterior shell, bay #2, arc strikes were noted. Reported arc strikes were actually thermo-couple attachment locations. Arc strike indications were removed with a flapper wheel. Shell thickness was verified after blend grinding. Ground area also received MT and visually examinations. Thickness checks and examination results were satisfactory.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Secor for GL Equipment Monitoring Date Aug. 1<sup>st</sup> 2002  
Owner or Owner's Designee, Title

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 Iowa and employed by HSB CT  
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 12/17/01 to 08/01/02, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

K. K. Saltzman Commissions NB 11047 A, N, I, C, NS 1290 IA  
Inspector's Signature National Board, State, Province, and Endorsements

Date Aug 01, 2002

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 09/10/02  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 CWO A57412  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: MO1933, RHR Loop "B" Torus Spray Header Isolation
5. (a) Applicable Construction Code \*ASME P&V Draft 19 68 Edition Addenda N/A Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components  
\* Design Specification Bech-MRS-M137

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
MO1933 RHR Loop "B" Torus Spray Header Isolation	Anchor Valve	0436-24	N/A	CWO A57412	1971	Repaired	No

7. Description of Work: Replaced tack weld between disc and disc nut.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐
- Other ☐ Pressure N/A psi Test Temp N/A °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.



## FORM NIS-2 (Back)

9. Remarks: Tack weld locking disc nut to disc was removed to perform machine work on valve stem. Disc nut tack weld was replaced using WPS P1-A582-T-416-AT rev. 0. Both weld procedure and Welder were qualified in accordance with ASME, Section IX. Completed weld was visually examined and found free of defects.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Scott Rusler GL Equipment Monitoring Date September 10, 2002  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 03/05/02 to 09/10/02, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

K. K. Ballymon Commissions NB11047 A, N, I, C, N, S 1290-IA  
Inspector's Signature National Board, State, Province, and Endorsements

Date Sept 10, 2002

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 10/14/02  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 CWO A50455  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: PSV2102, Core Spray Pump 1P-211A Suction Relief Valve
5. (a) Applicable Construction Code ASME Section III 19 71 Edition S71 Addenda \_\_\_\_\_ Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
PSV2102	Anderson, Greenwood Crosby	N98681-00-0001		CWO A50455	2001	Replaced	Yes

7. Description of Work: Replaced relief valve with a new, more reliable model.
8. Tests Conducted: \*\*Hydrostatic ☒ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 5.2 psi Test Temp N/A\* °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

\*Inservice functional pressure test, temperature is not required.

\*\*Subjected to manufacturer's hydro test at 425 Psig.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Valve was replaced due to a history of unsatisfactory testing performance. Replaced with newer model designed for the service this valve would experience. New valve was built to ASME Section III 1986 Edition, No Addenda, and was reconciled to original construction code using Bech-MRS -M460 Rev. 2. Inservice functional leak test (P02003) was performed satisfactorily after installation.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp NA

Certificate of Authorization No. NA Expiration Date NA

Signed Russell Farnsworth GL Equipment Monitoring Date November 20, 2002  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 2-12-02 to 11-25-02, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JPH Commissions NB 12329 ANI 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements

Date 11-25-02, 2002

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/16/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1119896  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: RHR Pump 1P-220B Torus Suction Line Snubber (HBB-023-SS-220)
5. (a) Applicable Construction Code \*ANSI B31.7 19 69 Edition 71 Addenda N/A Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components  
\* Design Specification Bech-MRS-119

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
RHR Pump 1P-220B Torus Suction Line Snubber	Bergen Paterson.	DA-065 (DAEC assigned)	N/A	PWO 1119896	N/A	Replaced	No

7. Description of Work: Replaced snubber DA-066 with rebuilt snubber DA-065.
8. Tests Conducted: \*Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐  
Other ☐ Pressure N/A Psi Test Temp N/A °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Snubber DA-066 located at HBB-023-SS-220 showed slight signs of leakage. Although DA-066 passed visual & functional test criteria, a rebuilt snubber (DA-065) was installed. The rebuild of DA-065 required only seals & fluid (no load bearing parts were replaced). A pre-service VT-3 (P03012) was completed following installation.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this  
conforms to the rules of the ASME Code, Section XI.

Replacement  
(repair or replacement)

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Scott B. Fisher for Sup. Equipment Reliability Date April, 16 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-5-02 to 4-17-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JD  
Inspector's Signature

Commissions NB 12329ANI, 1496-IA  
National Board, State, Province, and Endorsements

Date 4-17-03, 2003

## FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/18/03  
 Name  
P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
 Address
2. Plant Duane Arnold Energy Center Unit 1  
 Name  
3277 DAEC Road, Palo, IA 52324 CWO A62304  
 Address Repair Organization to P. O. No., Job No., etc.
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
 Name Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Reactor Feedwater Inlet Header Snubber (DLA-002-SS-006)
5. (a) Applicable Construction Code \*ASME, III, NF 19 74 Edition W76 Addenda N/A Code Case.  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components  
 \* Design Specification Bech-MRS-M227

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Reactor Feedwater Inlet Header Snubber	Lisega	01615123/061	N/A	CWO A62304 / DLA-002-SS-006	2001	Replacement	No

7. Description of Work: Replaced snubber, DLA-002-SS-006, with new Lisega snubber S/N 01615123/061.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐  
 Other ☐ Pressure N/A Psi Test Temp N/A °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Original snubber, S/N 97614263/08, developed fluid leak from loose fluid site-glass. Installed new Lisege snubber, S/N 01615123/061, at location DLA-002-SS-006. Installed snubber was subjected to a functional test prior to installation and a pre-service VT-3 (P03041) following installation.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Scott Paster Sup. Equipment Reliability Date April 21, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-6-03 to 4-22-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JR Commissions NB 12329ANE, 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 4-22, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/19/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1119897  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: RHR Pump 1P-220B/D Torus Suction Line Snubber (HBB-023-SS-219)
5. (a) Applicable Construction Code \*ANSI B31.7 19 69 Edition 71 Addenda N/A Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components  
\* Design Specification Bech-MRS-119

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
RHR Pump 1P-220B/D Torus Suction Line Snubber	Bergen Paterson.	DA-033 (DAEC assigned)	N/A	PWO 1119897 / HBB-023-SS-219	N/A	Replacement	No

7. Description of Work: Replaced snubber DA-359 with rebuilt snubber DA-033.
8. Tests Conducted:      \*Hydrostatic ☐      Pneumatic ☐      Nominal Operating Pressure ☐
- Other ☐ Pressure N/A Psi      Test Temp N/A ° F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.



## FORM NIS-2 (Back)

9. Remarks: Snubber DA-359 located at HBB-023-SS-219 failed as-found functional test criteria. A rebuilt snubber (DA-033) was installed. The rebuild of DA-033 required only seals & fluid (no load bearing parts were replaced). A pre-service VT-3 (P03013) was completed following installation.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)

conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Scott Lavelle for Sup. Equipment Reliability Date April 19, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-5-02 to 4-21-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JL Commissions NB 12329A-1 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements

Date 4-21, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/23/2003  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1123629  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Control Rod Drive Accumulator - Class 2
5. (a) Applicable Construction Code ASME VIII 19 68 Edition \_\_\_\_\_ Addenda \_\_\_\_\_ Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CRD Accumulator	General Electric	S/N C0004	N/A	1S220 (10-27)	1978	Replacement	YES

7. Description of Work: CRD Accumulator was replaced.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Replaced accumulator S/N 6576335 with S/N C0004, which is an improved design. Replaced accumulator  
Replaced accumulator will not be reused. A VT-2 (ref I03001) was completed and accepted.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement  
 (repair or replacement)  
 conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Rundell Jensen for TL Equipment Reliability Date April 28, 2003  
 Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-10-03 to 4-28-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JD Commissions NB 12329ANI 1496 IA  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 4-28, 2003

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Following actuation test of Squib valve XS2618A, a new replacement valve kit was installed. The kit included trigger assembly, primer chamber, and inlet fitting. Installed kit was pressure tested on STP 3.1.7-02 (P03033).

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. Nons Expiration Date N/A

Signed Russell J. Perfor GL Equipment Monitoring Date May 1, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-26-03 to 5-2-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JP Commissions NB 12329ANI, 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 5-2-03, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/27/2003  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1123631  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Control Rod Drive Accumulator - Class 2
5. (a) Applicable Construction Code ASME VIII 19 68 Edition        Addenda        Code Case.         
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CRD Accumulator	General Electric	S/N H2940	N/A	IS220 (22-11)	1980	Replacement	YES

7. Description of Work: CRD Accumulator was replaced.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Replaced accumulator S/N 6576410 with spare S/N H2940, which is an improved design.  
Replaced accumulator will not be reused. A VT-2 (ref I03001) was completed and accepted.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement  
 (repair or replacement)  
 conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Samuel Sorenson for TL Equipment Reliability Date April 28, 2003  
 Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-10-03 to 4-28-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JS Commissions NB 123294, 1496 ID  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 4-28, 2003

## FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/28/2003  
 Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
 Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
 Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1123638  
 Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
 Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Control Rod Drive Accumulator - Class 2
5. (a) Applicable Construction Code ASME VIII 19 68 Edition None Addenda None Code Case. None  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CRD Accumulator	General Electric	SN C0040	N/A	1S220 (34-11)	1978	Replacement	YES

7. Description of Work: CRD Accumulator was replaced.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.



## FORM NIS-2 (Back)

9. Remarks: Replaced accumulator S/N 6576404 with spare S/N C0040, which is an improved design.  
Replaced accumulator will not be reused. A VT-2 (ref I03001) was completed and accepted.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement  
 (repair or replacement)  
 conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell J. Even for TL Equipment Reliability Date April 28, 2003  
 Owner of Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-10-03 to 4-29-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JR Commissions NB 12329ANI, 1496 IA  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 4-29, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/28/2003  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1123636  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Control Rod Drive Accumulator - Class 2
5. (a) Applicable Construction Code ASME VIII 19 68 Edition None Addenda None Code Case. None  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CRD Accumulator	General Electric	S/N C0070	N/A	1S220 (10-31)	1978	Replacement	YES

7. Description of Work: CRD Accumulator was replaced.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 ° F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Replaced accumulator S/N 6576357 with spare S/N C0070, which is an improved design.  
Replaced accumulator will not be reused. A VT-2 (ref I03001) was completed and accepted.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement  
 (repair or replacement)  
 conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed [Signature] TL Equipment Reliability Date April 28, 2003  
 Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-12-03 To 4-29-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

[Signature] Commissions NB 12329AN I, 1496 IA  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 4-29, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/28/2003  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1123635  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Control Rod Drive Accumulator - Class 2
5. (a) Applicable Construction Code ASME VIII 19 68 Edition \_\_\_\_\_ Addenda \_\_\_\_\_ Code Case \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CRD Accumulator	General Electric	S/N C0061	N/A	1S220 (10-11)	1978	Replacement	YES

7. Description of Work: CRD Accumulator was replaced.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Replaced accumulator S/N 6576356 with spare S/N C0061, which is an improved design.  
Replaced accumulator will not be reused. A VT-2 (ref I03001) was completed and accepted.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement  
 (repair or replacement)  
 conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Deven for TL Equipment Reliability Date April 29, 2003  
 Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-12-03 To 4-29-03, 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 requirements of the ASME Code, Section XI.

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Jh Commissions NB 12329ANI 1496 IA  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 4-29, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/28/2003  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1123637  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Control Rod Drive Accumulator - Class 2
5. (a) Applicable Construction Code ASME VIII 19 68 Edition \_\_\_\_\_ Addenda \_\_\_\_\_ Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CRD Accumulator	General Electric	S/N H2859	N/A	1S220 (30-19)	1980	Replacement	YES

7. Description of Work: CRD Accumulator was replaced.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Replaced accumulator S/N 6576387 with spare S/N H2859, which is an improved design.  
Replaced accumulator will not be reused. A VT-2 (ref I03001) was completed and accepted.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement  
 (repair or replacement)  
 conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed *Punch Seunfor* TL Equipment Reliability Date April 28, 2003  
 Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-10-03 To 4-29-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

*JR* Commissions NB 12329ANI, 1496 IA  
 Inspector's Signature National Board, State, Province, and Endorsements  
 Date 4-29-03, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/28/2003  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1123633  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Control Rod Drive Accumulator - Class 2
5. (a) Applicable Construction Code ASME VIII 19 68 Edition None Addenda None Code Case. None  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CRD Accumulator	General Electric	S/N H3159	N/A	1S220 (26-27)	1980	Replacement	YES

7. Description of Work: CRD Accumulator was replaced.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.



## FORM NIS-2 (Back)

9. Remarks: Replaced accumulator S/N 6576432 with spare S/N H3159, which is an improved design.  
Replaced accumulator will not be reused. A VT-2 (ref I03001) was completed and accepted.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement  
 (repair or replacement)  
 conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell D. Evans for TL Equipment Reliability Date April 28, 2003  
 Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-10-03 To 4-29-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JD Commissions NB 123294NE 1496 FA  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 4-29, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/28/2003  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1123630  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Control Rod Drive Accumulator - Class 2
5. (a) Applicable Construction Code ASME VIII 19 68 Edition None Addenda None Code Case. None  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CRD Accumulator	General Electric	S/N C0010	N/A	1S220 (06-19)	1978	Replacement	YES

7. Description of Work: CRD Accumulator was replaced.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Replaced accumulator S/N 6576362 with spare S/N C0010, which is an improved design.  
Replaced accumulator will not be reused. A VT-2 (ref I03001) was completed and accepted.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement  
 (repair or replacement)  
 conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Penner TL Equipment Reliability Date April 28, 2003  
 Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-10-03 To 4-29-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JV Commissions NB 123294NI, 1496 IA  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 4-29-03, 2003

## FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/28/2003  
 Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
 Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
 Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1123632  
 Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
 Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Control Rod Drive Accumulator - Class 2
5. (a) Applicable Construction Code ASME VIII 19 68 Edition \_\_\_\_\_ Addenda \_\_\_\_\_ Code Case. \_\_\_\_\_  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CRD Accumulator	General Electric	S/N C0017	N/A	IS220 (22-23)	1978	Replacement	YES

7. Description of Work: CRD Accumulator was replaced.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

FORM NIS-2 18-03-17

## FORM NIS-2 (Back)

9. Remarks: Replaced accumulator S/N 6576347 with spare S/N C0017, which is an improved design.  
Replaced accumulator will not be reused. A VT-2 (ref I03001) was completed and accepted.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement  
 (repair or replacement)  
 conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Ronald J. Dwyer TL Equipment Reliability Date April 28, 2003  
 Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-12-03 To 4-29-03, 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 requirements of the ASME Code, Section XI.

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JL Commissions NB 123294NE 1496 EX  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 4-29, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 4/28/2003  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1123634  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Control Rod Drive Accumulator - Class 2
5. (a) Applicable Construction Code ASME VIII 19 68 Edition None Addenda None Code Case. None  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CRD Accumulator	General Electric	S/N C0031	N/A	1S220 (10-07)	1978	Replacement	YES

7. Description of Work: CRD Accumulator was replaced.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Replaced accumulator S/N 6576340 with spare S/N C0031, which is an improved design.  
Replaced accumulator will not be reused. A VT-2 (ref I03001) was completed and accepted.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this replacement  
 (repair or replacement)  
 conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Ronald Deppa TL Equipment Reliability Date April 29, 2003  
 Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-12-03 To 4-29-03, 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 requirements of the ASME Code, Section XI.

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JD Commissions NB 123294NI, 1496 IA  
 Inspector's Signature National Board, State, Province, and Endorsements

Date 4-29, 2003

FORM NIS-2 18-03-20

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 04/28/03  
Name  
P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address
2. Plant Duane Arnold Energy Center Unit 1  
Name  
3277 DAEC Road, Palo, IA 52324 CWO A61392  
Address Repair Organization to P. O. No., Job No., etc.
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Stand-by Liquid Control System
5. (a) Applicable Construction Code ASME, Section III 19 77 Edition S77 Addenda N/A Code Case.  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
SBLC Squib Valve	IST Conax Nuclear	1530	N/A	CWO A61392 / XS2618B	2003	Replaced	No

7. Description of Work: Installed Explosive actuated kit assembly.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1240 psi Test Temp N/A °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.



FORM NIS-2 18-03-20

## FORM NIS-2 (Back)

9. Remarks: Following actuation test of Squib valve XS2618B, a new replacement valve kit was installed. The kit included trigger assembly, primer chamber, and inlet fitting. Installed kit was pressure tested on STP 3.1.7-02 (P03034).

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Renee Drenth GL Equipment Monitoring Date April 30 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-26-03 to 5-2-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JP Commissions NB 12329ANE, 1496 FA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 5-2-03, 2003

FORM NIS-2 18-03-21

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/1/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 MWO 1125194  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Feedwater
5. (a) Applicable Construction Code ANSI B31.7 19 69 Edition N/A Addenda N/A Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
V14-004 operator spring can support	N/A	N/A	N/A	MWO 1125194 / DLA-2-H-19	N/A	Repaired	No
Gusset plate for support	Tuscaloosa Steel	Heat # A7X3024	N/A	MWO 1125194 / DLA-2-H-19	1998	Replaced	No
Base Plate for support	Tuscaloosa Steel	Heat # A7X3024	N/A	MWO 1125194 / DLA-2-H-19	1998	Replaced	No

7. Description of Work: Removed and reinstalled spring can support to allow installation of equipment
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐
- Other ☐ Pressure N/A Psi Test Temp N/A °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: In order to replace a drywell cooler, spring can support DLA-2-H-19 was removed and re-installed. During removal the base plate and gusset plate were damaged, and were replaced on reinstallation. After installation a VT-3(P03043) was performed on the assembly.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell J. Severn for GL Equipment Monitoring Date May 1, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-03-03 to 5-01-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JR Commissions NB 12329ANT, 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 5-01-03, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/1/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 CWO A62689  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam
5. (a) Applicable Construction Code ANSI B31.1 19 69 Edition N/A Addenda N/A Code Case.  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
1 <sup>st</sup> Elbow Upstream of CV4412 (MSIV)	N/A	N/A	N/A	CWO A62689 / DBA001	N/A	Repaired	No

7. Description of Work: Removed surface defects caused by nearby construction.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐  
Other ☐ Pressure N/A Psi Test Temp N/A °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: During replacement of the drywell cooler, the elbow upstream of CV4412 (Main Steam Isolation Valve) was inadvertently gouged. These surface defects were mechanically removed, and a successful surface exam was performed on the area. The elbow wall dimensions were still above the nominal wall thickness.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Randy D. Jones for GL Equipment Monitoring Date May 21 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-7-03 to 5-2-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JL Commissions NB 12329ANI- 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 5-2-03, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/1/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 CWO A60684  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam
5. (a) Applicable Construction Code ANSI B31.1 19 69 Edition N/A Addenda N/A Code Case.  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Recirculation Decon Flange	Energy Steel	HT #592WNE	N/A	CWO A60684 / SUS64.01	1994	Replaced	No

7. Description of Work: Replaced flange on Recirc System Piping.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 Psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: DAEC coats vessel internals with nobel metals to reduce corrosion. Replaced flange on recirculation line, and sent replaced flange to vendor to verify this coating. Replaced flange will be destroyed during vendor tests. Completed VT-2 after installation of new flange (ref. I03001).

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Brown for GL Equipment Reliability Date May 2, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT  
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-24-03 to 5-14-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JD Commissions NB 12329A N I. 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 5-14, 2003

## FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/2/03  
 Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
 Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
 Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 MWO 1121803  
 Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
 Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Containment
5. (a) Applicable Construction Code ASME Section III 19 68 Edition S68 Addenda N/A Code Case.  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Installed Lifting Lugs (welded) in Drywell	DuBose Steel	HT #822K42160	N/A	MWO 1121803/ SUS59.00	N/A	Repair/ Replacement	No

7. Description of Work: Installed two lifting lugs on Drywell.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☐ Pressure N/A\* Psi Test Temp N/A °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

\*No pressure test required per relief request MC-P001.



## FORM NIS-2 (Back)

9. Remarks: During replacement of the Drywell coolers during RFO 18, installed two lifting lugs on the drywell to facilitate the project. Performed a VT-1 (P03016) of surface prior to installation of lugs. Welds for lugs received surface exam as required by construction code. No pressure test was performed, as this was considered a minor repair to the Drywell, and DAEC relief request MC-P001 allows waiting until the next time a 10CFR 50 Appendix J test is performed to demonstrate leak tightness. Note to pressurize this area would require performing an Integrated Leak Rate Test.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement/Repair  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed *Daniel J. Dunbar* GL Equipment Reliability Date May 2, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-25-02 to 5-2-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

*[Signature]* Commissions NB 12329ANI 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 5-2-03, 2003

FORM NIS-2 18-03-25

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/6/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 CWO A62296  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Reactor Core Isolation Cooling (RCIC) (CLASS 2)
5. (a) Applicable Construction Code ASME Draft P&VC 19 68 Edition N/A Addenda N/A Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
V25-0001 Valve Disc	Anchor Valve Co	0436-12	N/A	CWO A62296 / SUS50.00	N/A	Repair	No

7. Description of Work: Machine 0.020" from back of disc for clearance
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐  
Other ☐ Pressure N/A\* Psi Test Temp N/A °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

\*No pressure test required per relief request MC-P001.

## FORM NIS-2 (Back)

9. Remarks: 0.020" was machined off the back of the disc to allow better seating of the disc. A Magnetic Particle Inspection was completed on the machined surface and found acceptable.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Al Thomas GL Equipment Reliability Date MAY 14, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-11-03 to 5-14-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JL Commissions NB 12329A2F, 1496 F1  
Inspector's Signature National Board, State, Province, and Endorsements

Date 5-14, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/14/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 Of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1119843  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam Safety Relief Valve (Class 1)
5. (a) Applicable Construction Code ASME III 19 68 Edition W68 Addenda N/A Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / SUS PWO 1119843 / 83.04	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Pilot Valve	Target Rock	S/N 218	N/A		1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (18-01-02). This Pilot Valve was rotated in place of S/N 207.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒ X
- Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Pilot Valve S/N 207 was removed and pilot valve S/N 218 was installed. Prior to installation S/N 218 was repaired and documented on NIS-2 (18-01-02). A VT-2 (103001) was completed on the mechanical connection and found acceptable.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Brown for TL Equipment Reliability Date May 14, 2003  
Owner/Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 10-17-02 to 5-14-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

SI Commissions NB 123294NL, 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements

Date 5-14-03 2001  
009 5-14-03

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/14/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 Of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1119844  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam Safety Relief Valve (Class 1)
5. (a) Applicable Construction Code ASME III 19 68 Edition W68 Addenda N/A Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / SUS PWO 1119844 / 83.04	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Pilot Valve	Target Rock	S/N 226	N/A		1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (18-01-02). This Pilot Valve was rotated in place of S/N 201.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Pilot Valve S/N 201 was removed and pilot valve S/N 226 was installed. Prior to installation S/N 226 was repaired and documented on NIS-2 (18-01-02). A VT-2 (103001) was completed on the mechanical connection and found acceptable.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed *Timothy J. Dwyer* TL Equipment Reliability Date May 14, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 10-17-02 to 5-14-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

*JR* Commissions NB 12329ANE 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 5-14-03 , 2001  
JR 5-14-03

FORM NIS-2 18-03-30

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/14/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 Of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1119845  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam Safety Relief Valve (Class 1)
5. (a) Applicable Construction Code ASME III 19 68 Edition W68 Addenda N/A Code Case.  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Pilot Valve	Target Rock	S/N 189	N/A	Work Order / SUS PWO 1119845 / 83.04	1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (18-02-08). This Pilot Valve was rotated in place of S/N 201. (200) RFS 7/7/2003
8. Tests Conducted: Hydrostatic ☐ JS 7-7-03 Pneumatic ☐ Nominal Operating Pressure ☒ X
- Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.



## FORM NIS-2 (Back)

9. Remarks: Pilot Valve S/N 200 was removed and pilot valve S/N 189 was installed. Prior to installation S/N 189 was repaired and documented on NIS-2 (18-02-08). A VT-2 (103001) was completed on the mechanical connection and found acceptable.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed [Signature] TL Equipment Reliability Date May 14, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT  
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 1-28-03 to 5-14-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

[Signature] Commissions NB 123294N I, 1496 I  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 5-14-03 2001  
JYB 5-14-03

FORM NIS-2 18-03-31

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/14/03  
Name \_\_\_\_\_  
P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 Of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_  
3277 DAEC Road, Palo, IA 52324 PWO 1119846  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam Safety Valve (Class 1)
5. (a) Applicable Construction Code ASME III 19 68 Edition S69 Addenda N/A Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / SUS PWO 1119846 / 83.04	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Stud for PSV4403	Cardinal Industrial	Ht# 8097296	N/A		1992	Replacement	No

7. Description of Work: Replaced stud on Safety Valve PSV4403, which was damaged during disassembly.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

FORM NIS-2 18-03-31

## FORM NIS-2 (Back)

9. Remarks: During removal of Main Steam Safety Valve PSV4403, stud was damaged and replaced. Successful VT-2 (I03001) was completed.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Devor IL Equipment Reliability Date May 14 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT  
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-8-03 to 5-14-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JR Commissions NB 12329ANI- 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 5-14, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
**As Required by the Provisions of the ASME Code Section XI**

1. Owners Alliant Energy (IES Utilities) Date 05/14/03  
 Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 Of 2  
 Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
 Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1119848  
 Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
 Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam Safety Relief Valve (Class 1)
5. (a) Applicable Construction Code ASME III 19 68 Edition W68 Addenda N/A Code Case. \_\_\_\_\_  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / SUS	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Pilot Valve	Target Rock	S/N 141	N/A	PWO 1119848 / 83.04	1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (18-01-02). This Pilot Valve was rotated in place of S/N 176.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Pilot Valve S/N 176 was removed and pilot valve S/N 141 was installed. Prior to installation S/N 141 was repaired and documented on NIS-2 (18-01-02). A VT-2 (I03001) was completed on the mechanical connection and found acceptable.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed *[Signature]* TL Equipment Reliability Date May 14, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT  
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 10-17-02 to 5-14-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

*[Signature]* Commissions NB 12329ANE, 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 5-14, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/14/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 Of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1119849  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam Safety Relief Valve (Class 1)
5. (a) Applicable Construction Code ASME III 19 68 Edition W68 Addenda N/A Code Case.  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / SUS	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Pilot Valve	Target Rock	S/N 203	N/A	PWO 1119849 / 83.04	1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (18-02-08). This Pilot Valve was rotated in place of S/N 227.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Pilot Valve S/N 227 was removed and pilot valve S/N 203 was installed. Prior to installation S/N203 was repaired and documented on NIS-2 (18-02-08). A VT-2 (103001) was completed on the mechanical connection and found acceptable.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed [Signature] for TL Equipment Reliability Date May 14, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT  
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 1-28-03 to 5-14-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

[Signature] Commissions NB 12329AN-E, 1496 FA  
Inspector's Signature National Board, State, Province, and Endorsements

Date 5-14, 2003

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 05/14/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 Of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 PWO 1119850  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam Safety Relief Valve (Class 1)
5. (a) Applicable Construction Code ASME III 19 68 Edition W68 Addenda N/A Code Case. \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / SUS PWO 1119850 / 83.04	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Pilot Valve	Target Rock	S/N 202	N/A		1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (18-01-02). This Pilot Valve was rotated in place of S/N 199.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.



## FORM NIS-2 (Back)

9. Remarks: Pilot Valve S/N 199 was removed and pilot valve S/N 202 was installed. Prior to installation S/N202 was repaired and documented on NIS-2 (18-01-02). A VT-2 (103001) was completed on the mechanical connection and found acceptable.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Denefer TL Equipment Reliability Date May 14 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 10-17-02 to 5-14-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JJ Commissions NB 12329ANI, 1496 FA  
Inspector's Signature National Board, State, Province, and Endorsements

Date 5-14, 2003

FORM NIS-2 18-03-35

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
**As Required by the Provisions of the ASME Code Section XI**

1. Owners Alliant Energy (IES Utilities) Date 06/25/03  
 Name \_\_\_\_\_  
P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 Of 2  
 Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
 Name \_\_\_\_\_  
3277 DAEC Road, Palo, IA 52324 CWO A58727  
 Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
 Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Recirculation System Pump Seal (Class 1)
5. (a) Applicable Construction Code ASME Section III 19 68 Edition \_\_\_\_\_ Addenda N/A Code Case. \_\_\_\_\_  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / SUS CWO A58727 / 64.01	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Recirc Seal for 1P201B	Byron Jackson	S/N 691-S-1006	N/A		1971	Replacement	No

7. Description of Work: The replacement recirculation pump seal was repaired under NIS-2 (18-02-05).
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
 Other ☐ Pressure 1020 psi Test Temp 210 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Recirc seal s/n 691-S-1006 replaced seal s/n 741S2741. Prior to installation seal 691-S-1006 was repaired and documented on NIS-2 (18-02-05). A VT-2 (I03001) was completed on the assembly attached to the pump, and was found acceptable.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Quell Fournier for TL Equipment Reliability Date June 26<sup>th</sup> 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT  
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 10-16-02 to 6-26-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JP Commissions NB 123294NE 1496-IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 6-26, 2003

## FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS

As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 06/25/03  
 Name  
P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 Of 2  
 Address
2. Plant Duane Arnold Energy Center Unit 1  
 Name  
3277 DAEC Road, Palo, IA 52324 CWO A57816  
 Address Repair Organization to P. O. No., Job No., etc.
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
 Name Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Nuclear Boiler (Class 1)
5. (a) Applicable Construction Code ANSI B31.7 19 69 Edition None Addenda N/A Code Case.  
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / SUS	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
M119AC-11790	N/A	None	N/A	CWO A57816 / 62.00	2003	Repair/Replacement	No
M119AC-11791	N/A	None	N/A	CWO A57816 / 62.00	2003	Repair/Replacement	No
M119AC-11792	N/A	None	N/A	CWO A57816 / 62.00	2003	Repair/Replacement	No
M119AC-11793	N/A	None	N/A	CWO A57816 / 62.00	2003	Repair/Replacement	No
M119AC-11794	N/A	None	N/A	CWO A57816 / 62.00	2003	Repair/Replacement	No

7. Description of Work: This work order moves the supports for DBA009 from existing locations to the insulation head.superstructure.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐  
 Other ☐ Pressure N/A psi Test Temp N/A °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: These five supports were moved from floor attachments to being mounted to the insulation head superstructure. Existing supports were used with only modifications to the mounting. All welds performed with Section IX qualified procedure (P1-AT-Lh rev 8) and qualified welders.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair/Replacement  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed W J Hays Co TL Equipment Reliability Date JULY 10, 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-27-02 to 7-10-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

W J Hays Commissions NB 12329ANI, 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements

Date 7-10, 2003

FORM NIS-2 18-03-37

**FORM NIS-2 OWNER'S REPORT FOR REPAIRS OR REPLACEMENTS**  
As Required by the Provisions of the ASME Code Section XI

1. Owners Alliant Energy (IES Utilities) Date 06/25/03  
Name \_\_\_\_\_
- P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 Of 2  
Address \_\_\_\_\_
2. Plant Duane Arnold Energy Center Unit 1  
Name \_\_\_\_\_
- 3277 DAEC Road, Palo, IA 52324 CWO A60844  
Address \_\_\_\_\_ Repair Organization to P. O. No., Job No., etc. \_\_\_\_\_
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None  
Name \_\_\_\_\_ Authorization No. None  
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam Class II
5. (a) Applicable Construction Code ANSI B31.1 19 67 Edition \_\_\_\_\_ Addenda N/A Code Case \_\_\_\_\_  
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / SUS	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Valve	Velan	Unknown	N/A	V03-0096	Unknown	Repaired	No

7. Description of Work: Repaired body-to-bonnet leak on V03-0096
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒  
Other ☐ Pressure 940 psi Test Temp 542 °F

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8 1/2 in. x 11 in., (2) information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

(12/82) This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, NY 10017.

## FORM NIS-2 (Back)

9. Remarks: Valve disassembled due to body-to-bonnet leak. Machined bonnet to remove steam cutting. Performed MT on machined surface. Successfully performed VT-2 (P03035) exam after installation.

## CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair  
(repair or replacement)  
conforms to the rules of the ASME Code, Section XI.

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Brown for TL Equipment Reliability Date June 26<sup>th</sup> 2003  
Owner or Owner's Designee, Title

## 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 Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-29-03 to 6-26-03, 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 requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed 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.

JN Commissions NB 12329ANT, 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements  
Date 6-26, 2003

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

Part H, page 1 of 1

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required) : N/A  | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**ABSTRACT OF CONDITIONS NOTED AND CORRECTIVE MEASURES TAKEN:**

The corrective measures are addressed in this report and were performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 1992 with the 1992 Addenda (Ref. Relief Request NDE-R015 Rev. 1), and the Duane Arnold Energy Center Updated Final Safety Analysis Report. The corrective measures performed as Repairs or Replacements are listed in Part F of this report and are documented, using Form NIS-2, in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section XI, 1992, 1992 Addenda. Specific details and associated records of additional corrective measures are on file at Duane Arnold Energy Center. The corrective measures addressed were performed during the period of May 28, 2001 through April 20, 2003.



**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
May 28, 2001 through April 20, 2003

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

**Part I, page 1 of 14**

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required) : N/A  | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

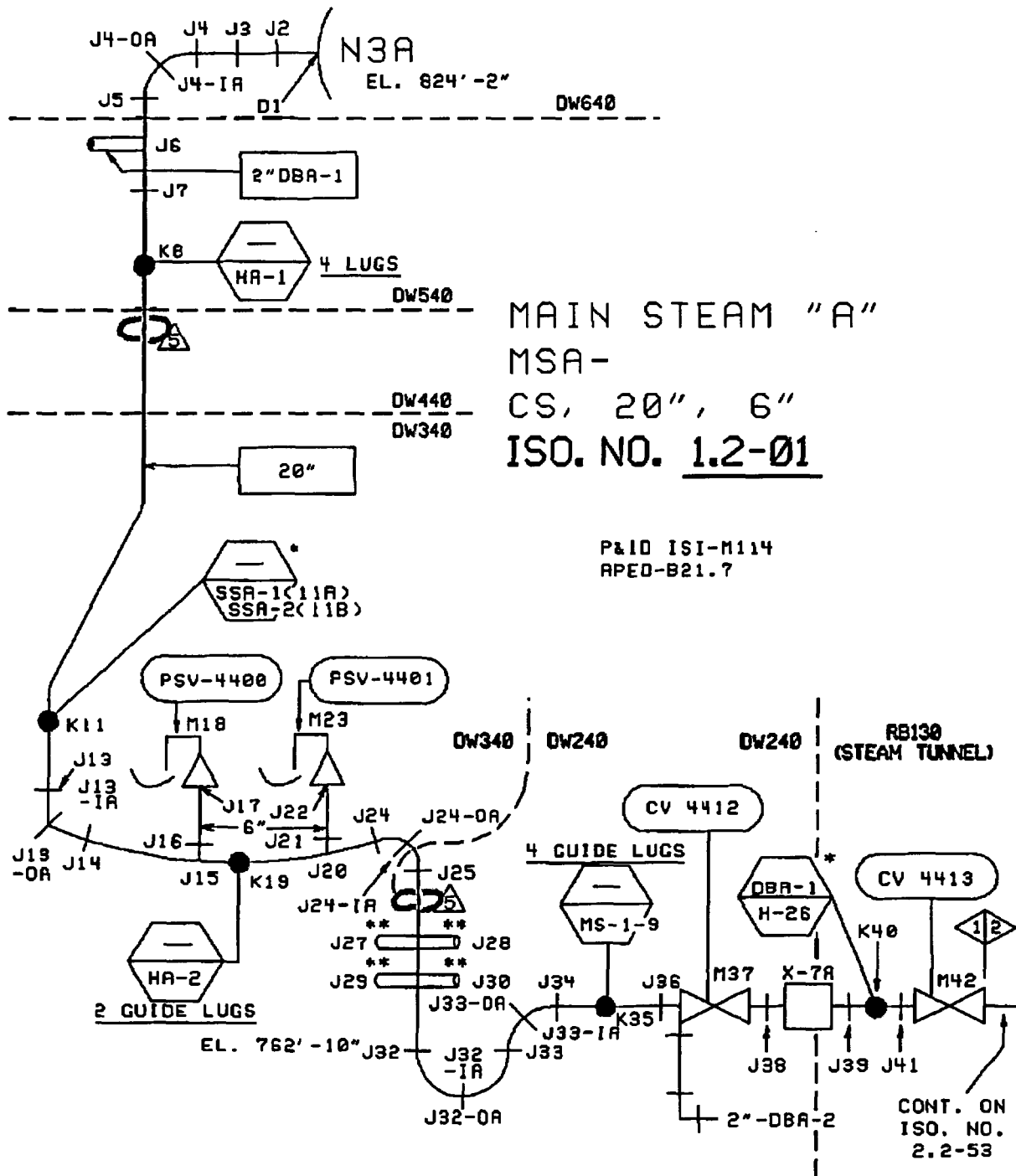
**ISI FIGURES AND ISOMETRICS**

**PLEASE NOTE: ISI Figures and Isometrics are listed in Part B and Part D of this report**

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

**Part I, page 2 of 14**

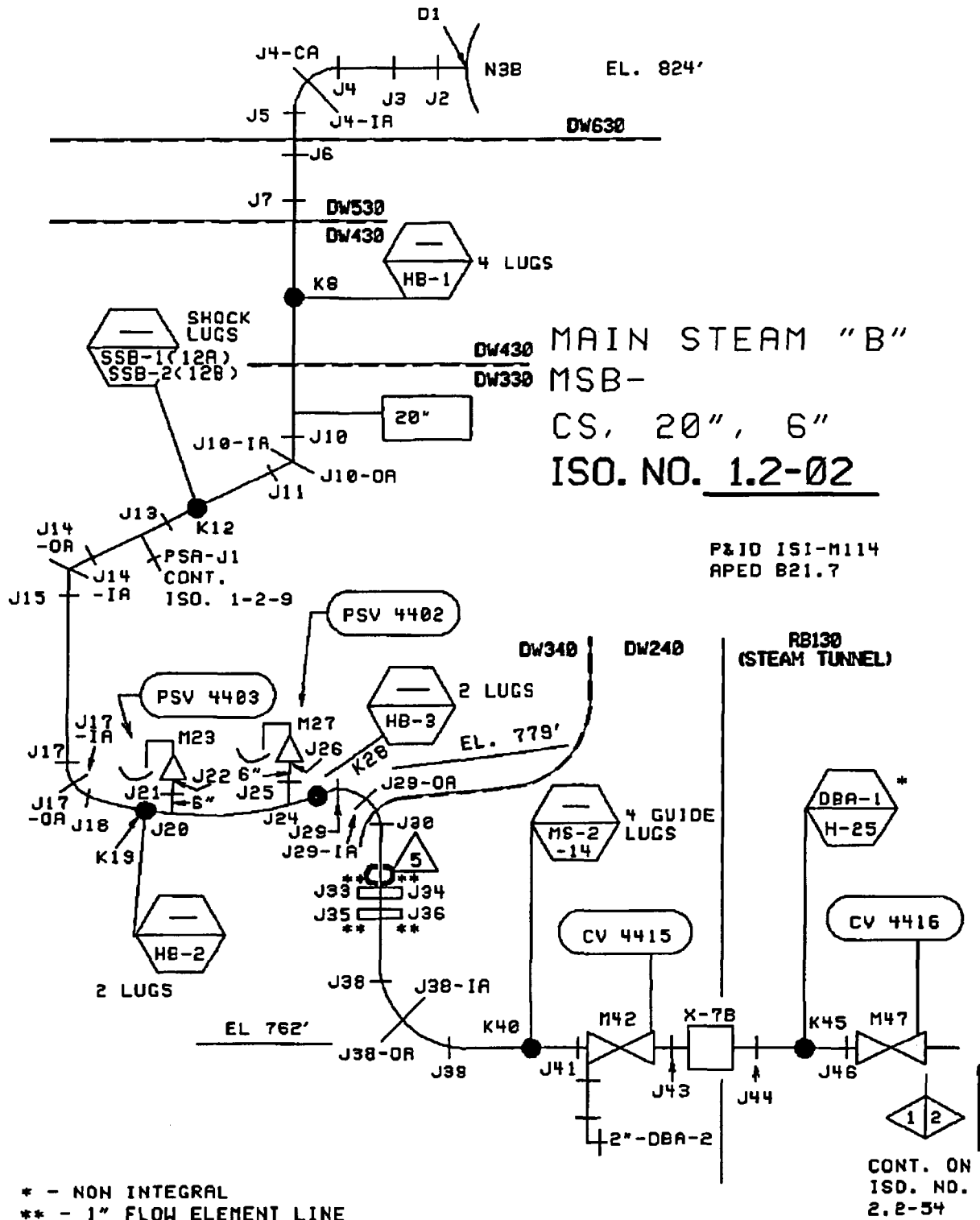
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\* - NON INTEGRAL  
\*\* - 1" FLOW ELEMENT LINE

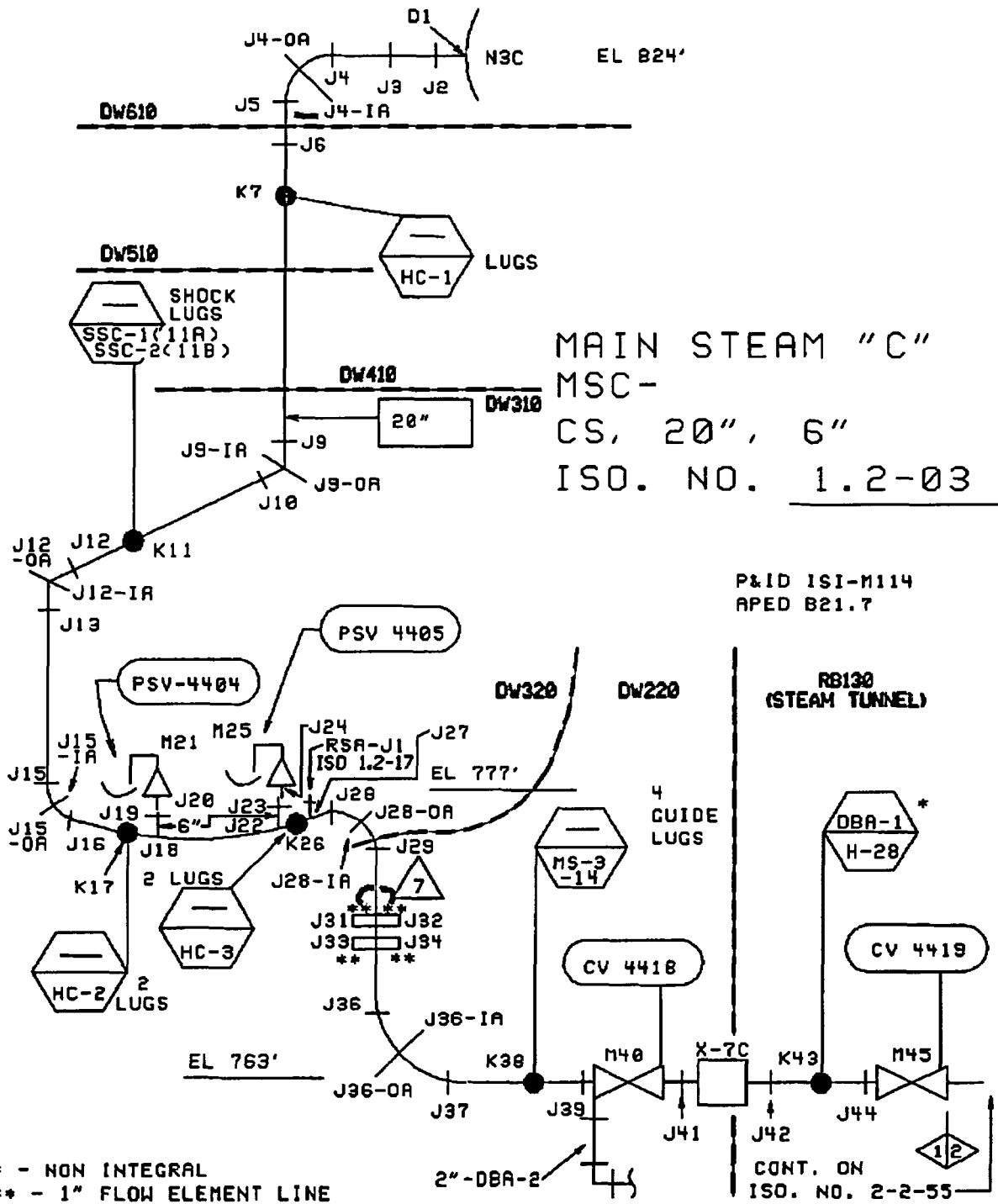
# DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-6-86	SAL	SAL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	7-24-90	DA	DA	GP	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1-18-96	TAK	JW	GP	REV. PER DUF-0018
5	3-21-96	JAH	DA	GP	REV. PER DUF-U0027



## DRAWING RELEASE RECORD

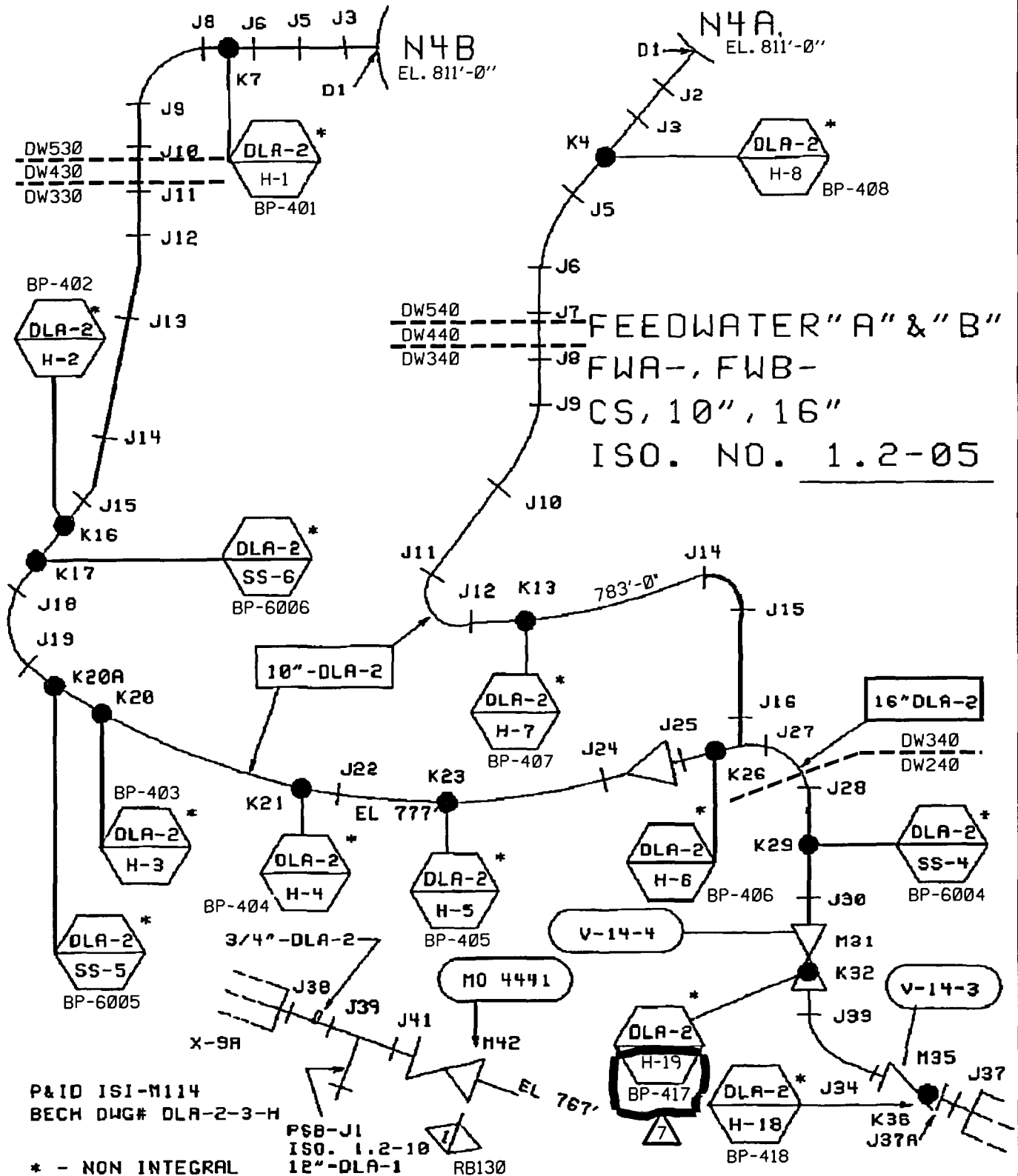
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	9-6-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	BJB	GP	ISO'S TO CAD FORMAT AS PER NG-88-8784
3	7-22-94	TAK	JW	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1-18-96	JAH	DA	GP	REV. PER DUF-0018
5	3-21-96				REV. PER DUF-U0027



## DRAWING RELEASE RECORD

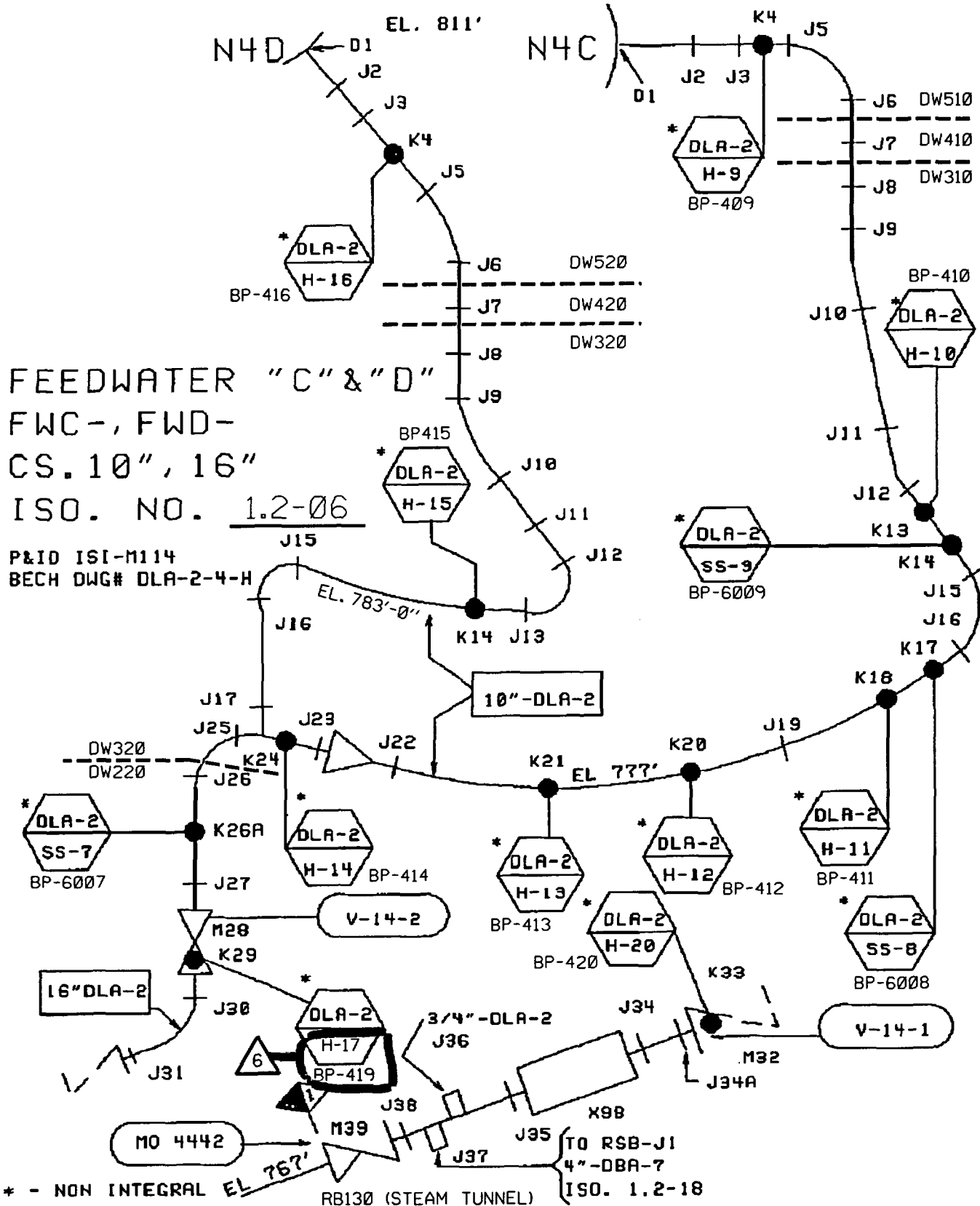
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	3-21-96	JAH	DA	GP	REV. PER DUF-U0027
2	9-24-90	DA	GP	KKM	ISO'S TO CAD FORMAT AS PER NG-88-8784
3	10-3-91	DA	GP	KKM	REMOVED EXTRA WELD NUMBER
4	4-2-93	DA	FED	GP	CHANGED ISO #
5	7-22-94	DA	JW	GP	REVISED PER ISI INSPECTION WALKDOWN
6	1-24-96	TAK	JW	GP	REV. PER DUF-0018

DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC



## DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	6/4/99	DA	GP	FED	REVISED PER DURF-U0111
2	3-24-90	DA	GP	KKM	SO'S TO CAD FORMAT AS PER NC-89-0794
3	11-10-92	DA	GP	GP	REVISED PER DDC-2041
4	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	3-21-96	JAH	DA	GP	REVISED PER DURF-U0027
6	3/26/98	DA	TAK	GP	REVISED PER DURF-U0046



\* - NON INTEGRAL

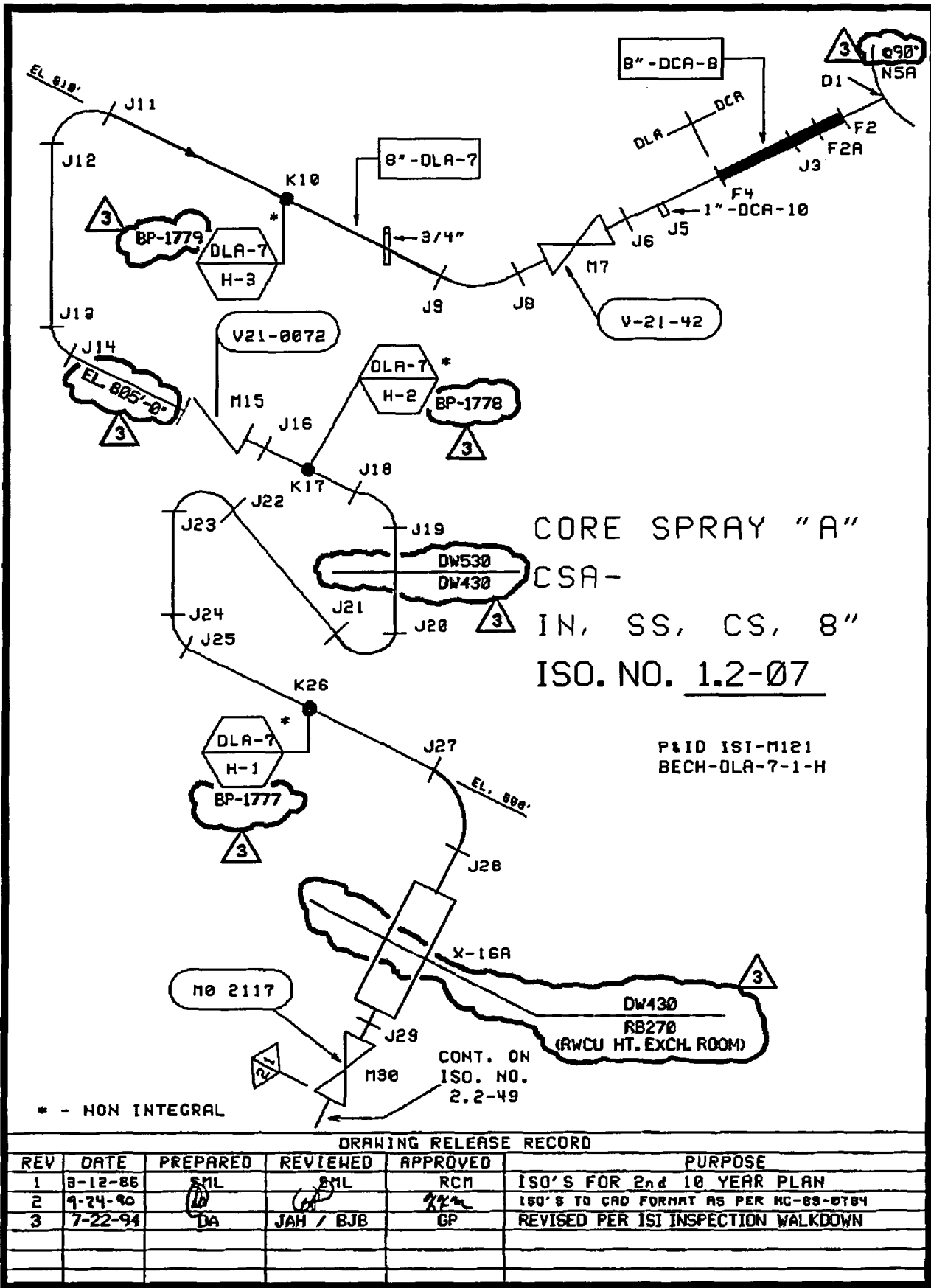
RB130 (STEAM TUNNEL)

ISO. 1.2-18

# DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-11-86	SNL	SNL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	GP	KKN	ISO'S TO CAD FORMAT AS PER NC-89-0794
3	11-18-92	<i>(Signature)</i>	<i>(Signature)</i>	<i>(Signature)</i>	REVISED PER ODC-2041
4	7-22-94	DA	BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
5	3/26/98	DA	TAK	GP	REVISED PER DURE-U0046
6	6/4/99	DA	GP	FED	REVISED PER DURE-U0111





## DRAWING RELEASE RECORD

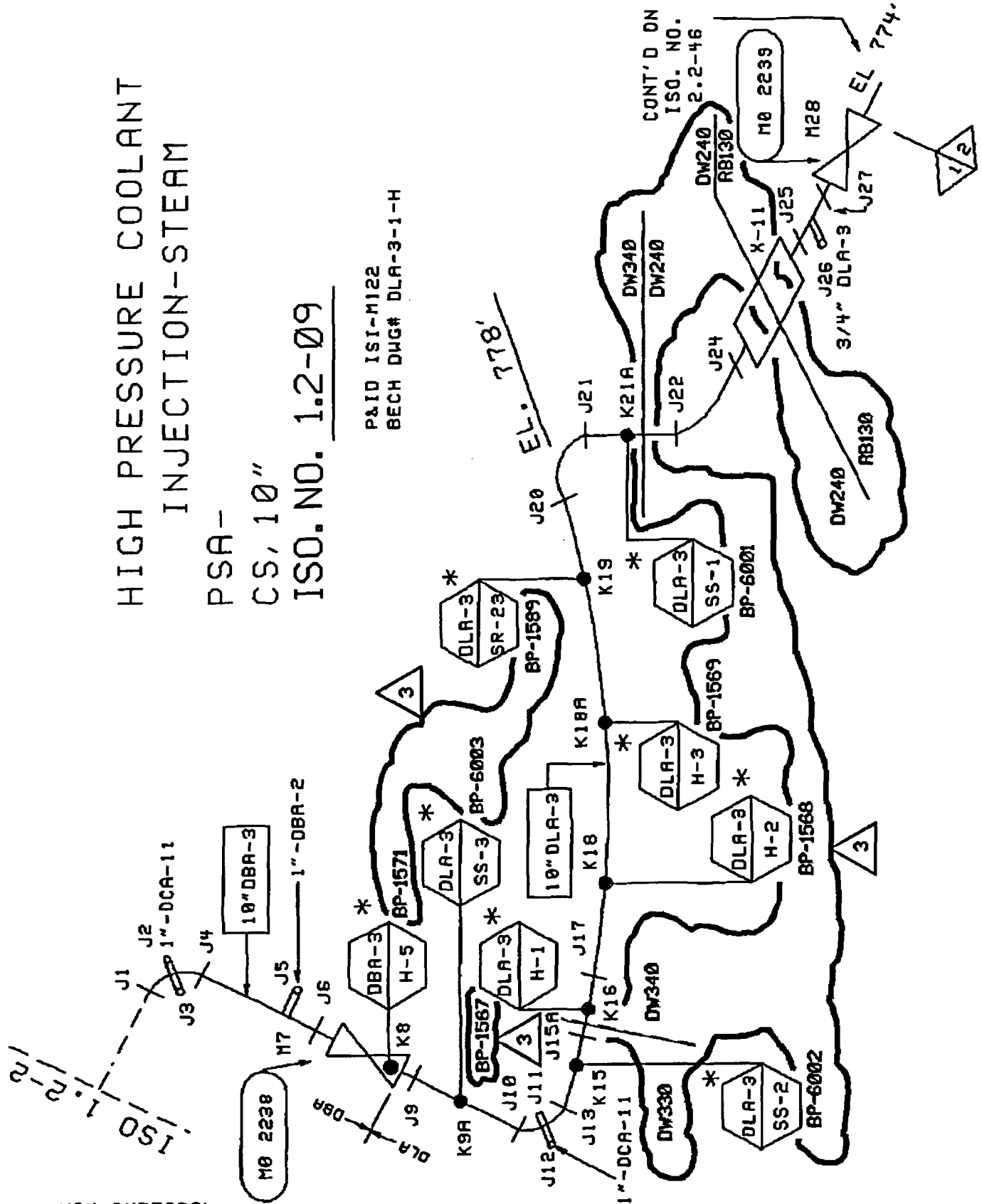
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	8-12-85	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	JAH / BJB	GP	ISO'S TO CAD FORMAT AS PER NG-89-0184
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN

153

CS, 10"

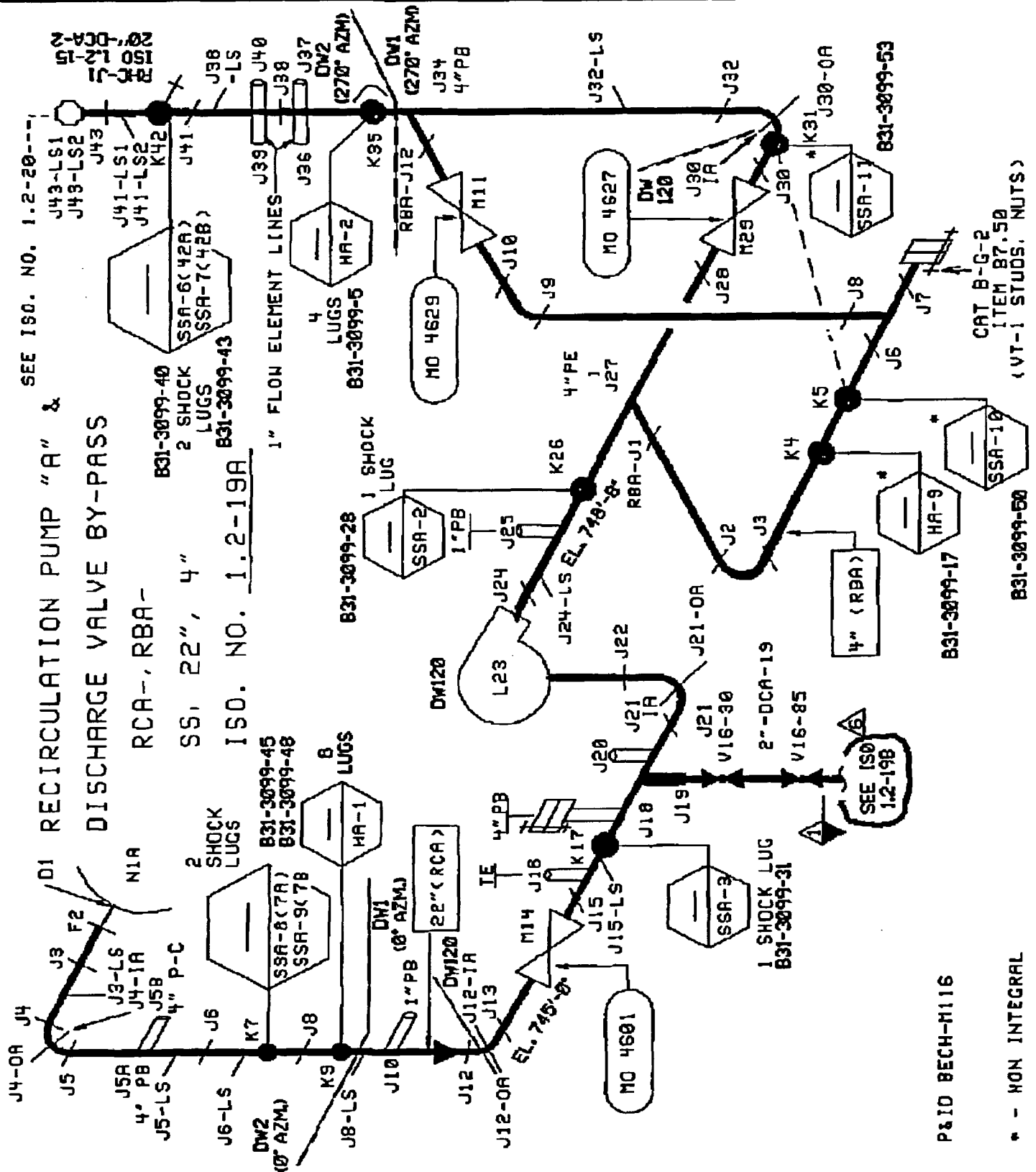
ISO. NO. 1.2-09

P&ID ISI-M122  
BECH DWG# DLA-3-1-H



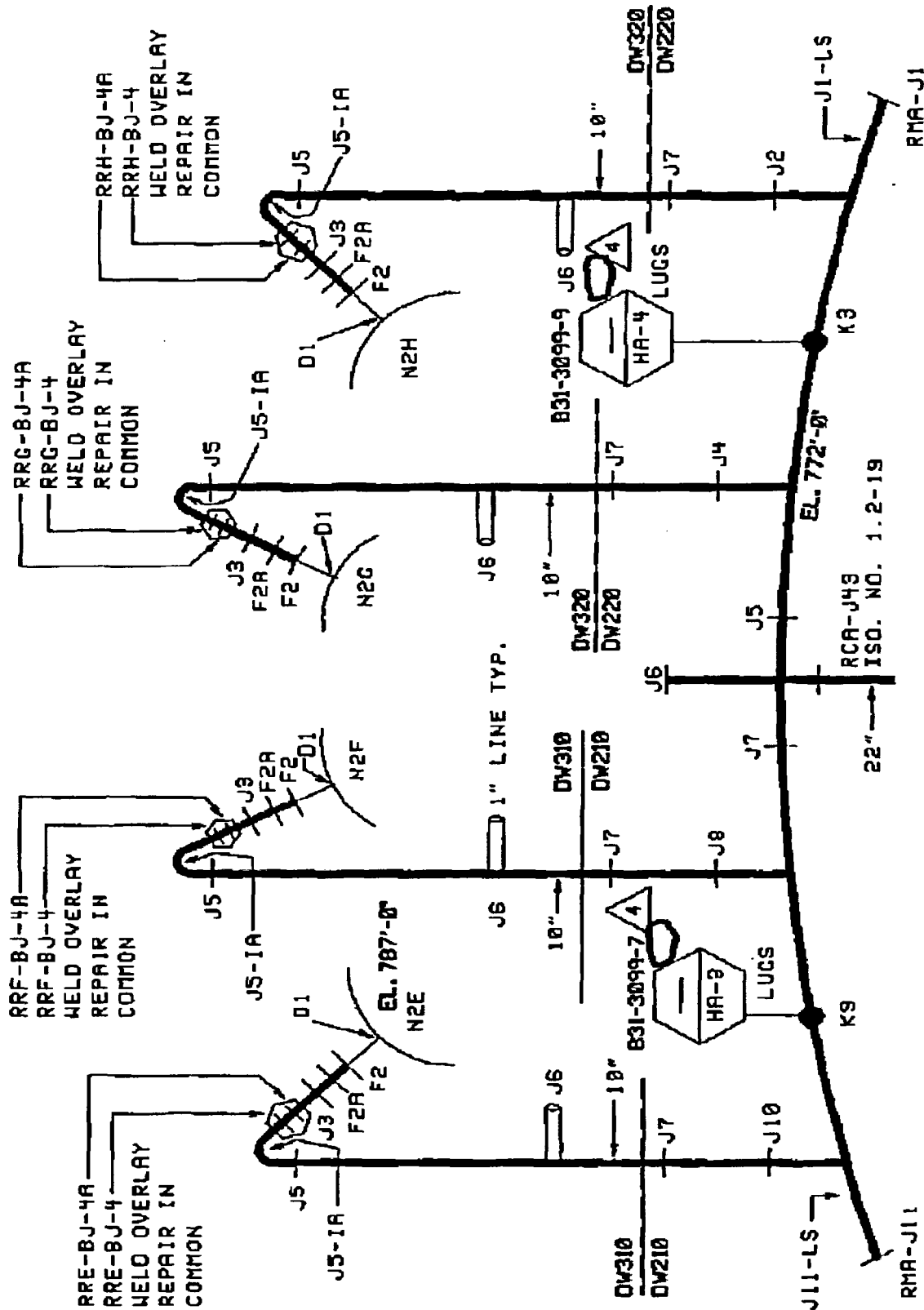
# DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-12-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	4-24-90	<i>(h)</i>	<i>GP</i>	<i>KZm</i>	ISO'S TO CRD FORMAT AS PER NG-89-0794
3	7-22-94	DA	BJB	GP	REVISED PER ISI INSPECTION WALKDOWN



# DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-18-86	SNL	SNL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	GP	KKM	ISO'S TO CAD FORMAT AS PER NC-85-0794
3	4-2-93	DA	GP	SC	ADDED FLANGE
4	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JDF	GP	REVISED PER DUF-0013
6	1-18-96	TAK	JW	GP	REV. PER DUF-0018



RECIRCULATION MANIFOLD "A" &amp; RISERS E, F, G, H

RMA-, RRE-, RRF-, RRG-, RHH-

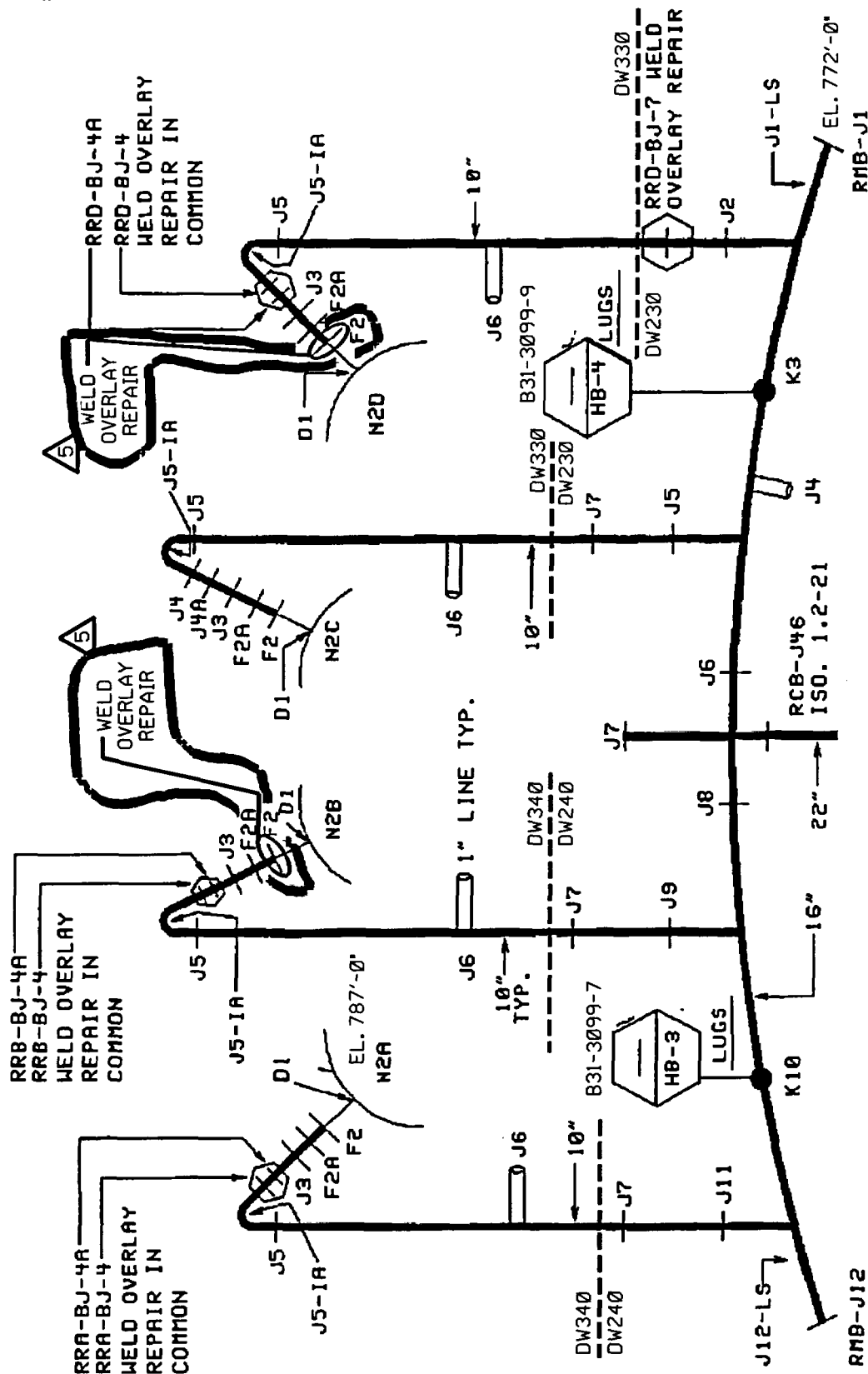
SS, 16", 10"

ISO. NO. 1.2-20

4  
PAID BECH-M116  
APED-B31-9

**DRAWING RELEASE RECORD**

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-28-86	SNL	SNL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	(S)	(S)	KRM	ISO'S TO CAD FORMAT AS PER NC-89-0794
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1-18-96	TAK	JW	GP	REV. PER DUF-0018



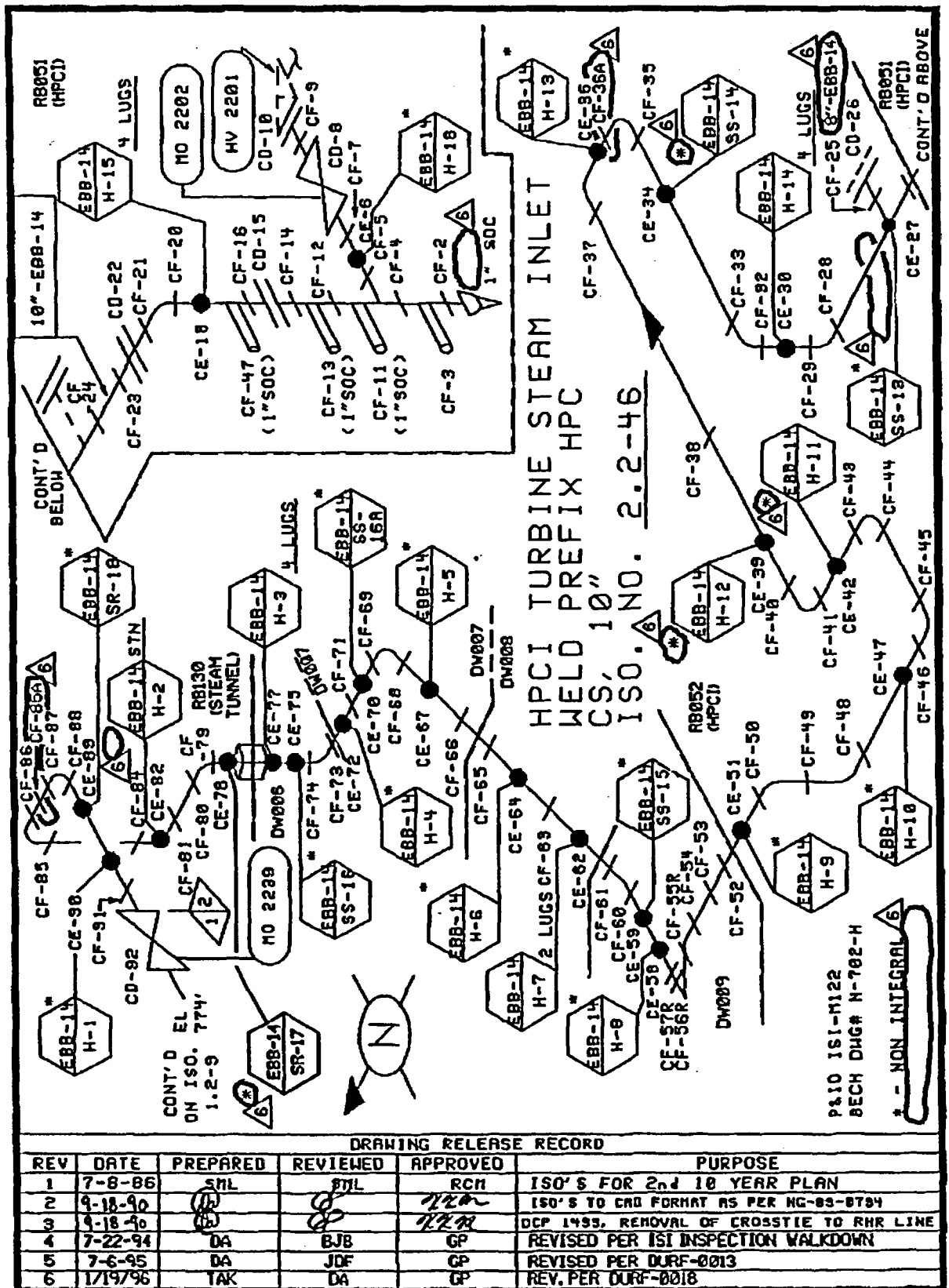
RECIRCULATION MANIFOLD "B" & RISERS A, B, C, D  
RMB-, RRA-, RRB-, RRC-, RRD-,  
SS, 16", 10"  
ISO. NO. 1.2-22

P&ID BECH-M116  
APED B31-9

**DRAWING RELEASE RECORD**

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-20-86	SHL	SHL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	DA	RCM	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1/18/96	TAK	JW	GP	REV. PER DURF-0018
5	1/13/00	JW	TAK	GP	REV. PER DURF-0136

DRAWING RELEASE RECORD					
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-3-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DA	CR	KKM	ISO'S TO CAD FORMAT AS PER NC-89-0794
3	4-2-93	DA	CR	C	REVISED NUMBER
4	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JDF	GP	REVISED PER DURF-0013
6	1/19/96	TAK	DA	GP	REV. PER DURF-0018



**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
May 28, 2001 through April 20, 2003

Part J, page 1 of 4

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**STATUS OF WORK FOR THIRD TEN YEAR INTERVAL**

(Those percentages shown are actual, where the percentages exceed the allowable only the maximum (50% for period one and at least 16% for period two) will be taken credit for).

**CLASS 1**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
B1.11	4	0%	0%	0%	
B1.12	8	0%	0%	0%	
B1.21	2	25%	50%	0%	
B1.22	15	0%	0%	0%	
B1.30	1	50%	50%	0%	See Note 7
B1.40	1	33%	67%	0%	
B1.51	1	0%	0%	0%	
B3.90	33	48%	73%	0%	See Note 1,8
B3.100	33	48%	73%	0%	See Note 1,8
B4.11	2	0%	0%	0%	See Note 2
B4.12	89	0%	0%	0%	See Note 2
B4.13	30	0%	0%	0%	See Note 2
B5.10	14	50%	71%	0%	See Note 8 and 11
B5.20	8	38%	63%	0%	See Note 11
B5.130	8	38%	63%	0%	See Note 11
B5.140	2	0%	50%	0%	See Note 11
B6.10	60	33%	67%	0%	
B6.20	56	29%	64%	0%	
B6.30	4	100%	100%	0%	
B6.40	60	33%	67%	0%	
B6.50	60	33%	67%	0%	
B6.180	2	0%	0%	0%	See Note 3
B6.190	2	0%	0%	0%	See Note 3
B6.200	2	0%	0%	0%	See Note 3
B7.10	3	33%	67%	0%	
B7.50	5	20%	20%	0%	See Note 3
B7.60	2	0%	0%	0%	See Note 3
B7.70	47	4%	6%	0%	See Note 3
B7.80	89	15%	15%	0%	See Note 3
B9.11	94	22%	33%	0%	See Note 11
B9.12	0	0%	0%	0%	See Note 6 and 11
B9.21	9	22%	22%	0%	See Note 11
B9.31	6	17%	33%	0%	See Note 11
B9.32	1	0%	0%	0%	See Note 11
B9.40	23	22%	40%	0%	See Note 11
B10.10	1	0%	0%	0%	See Note 4
B10.20	3	33%	67%	0%	See Note 4



**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
May 28, 2001 through April 20, 2003

Part J, page 2 of 4

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**STATUS OF WORK FOR THIRD TEN YEAR INTERVAL**

**CLASS 1**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
B10.30	1	0%	0%	0%	See Note 4
B12.20	2	0%	0%	0%	
B12.50	45	6%	9%	0%	See Note 3
B13.10	35	37%	63%	0%	
B13.20	11	36%	36%	0%	
B13.30	27	4%	4%	0%	
B13.40	5	20%	20%	0%	
B14.10	3	0%	0%	0%	
B15.10	1	N/A	N/A	N/A	Once per refueling outage
B15.11	1	N/A	N/A	N/A	Once per interval

**CLASS 1 AND CLASS 2 Risk Informed**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
R-I	70	0%	33%	0%	See Note 11

**CLASS 2**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
C1.10	2	50%	50%	0%	
C1.20	1	0%	100%	0%	
C2.21	2	0%	50%	0%	
C2.22	2	0%	50%	0%	
C3.10	1	0%	0%	0%	See Note 4
C3.20	7	29%	57%	0%	See Note 4
C5.51	69	17%	36%	0%	See Note 11
C5.81	1	100%	100%	0%	See Note 11
C7.10	5	N/A	N/A	N/A	Once per period
C7.20	5	N/A	N/A	N/A	Once per interval

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

Part J, page 3 of 4

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required) : N/A  | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**STATUS OF WORK FOR THIRD TEN YEAR INTERVAL**

**CLASS 1 AND 2 SUPPORTS**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
F1.10	42	33%	64%	0%	See Note 5
F1.20	52	27%	58%	0%	See Note 5
F1.40	20	40%	65%	0%	See Note 5

**STATUS OF WORK FOR (IWE) FIRST TEN YEAR INTERVAL**

**CLASS MC**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
E1.11	3	33%	67%	0%	
E1.12	31	19%	55%	0%	
E1.20	8	38%	75%	0%	
E4.11	2	0%	40%	0%	See Note 9
E5.30	4	25%	50%	0%	
E8.10	14	29%	57%	0%	
E9.20	*	N/A	N/A	N/A	See Note 10

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

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- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**STATUS OF WORK FOR THIRD TEN YEAR INTERVAL**

- NOTE 1 - Item Numbers B3.90, B3.100**  
There are a total of 34 nozzles, however 1 of the nozzles is exempt by IWB-1220(c) and not included in the percentages.
- NOTE 2 - Item Numbers B4.11, B4.12, B4.13**  
These items are required to be examined during conduct of the system hydrostatic test, IES Utilities has implemented Code Case N-498-1 (TAP-P011)
- NOTE 3 - Item Numbers B6.180, B6.190, B6.200, B7.50, B7.60, B7.70, B7.80, B12.50**  
These examinations are performed when the component is disassembled for other reasons. Therefore IWX-2412-1 does not apply.
- NOTE 4 - Item Numbers B10.10, B10.20, B10.30, C3.10, C3.20**  
These item numbers are from Code Case N509 (TAP-I007)
- NOTE 5 - Item Number F1.10, F1.20, F1.40**  
These item numbers are from Code Case N491 (TAP-I008)
- NOTE 6 - Item Number B9.12**  
There are no welds counted for this item number because of the use of Code Case N-524 (NDE-R012)
- NOTE 7 - Item Number B1.30**  
50% of the shell-to-flange weld may be performed during the first and third inspection periods as allowed by Note 4 of Table IWB-2500-1.
- NOTE 8 - Item Numbers B3.90, B3.100, B5.10**  
Relief Request NDE-R035 allows alternative percentages (ref. Code Case N-598). 2 of the Nozzle-to-safeend welds (RRB-F002 and RRD-F002) have been repaired by applying a weld overlay. These two welds are now covered by the requirements of BWRVIP-75.
- NOTE 9 - Item Number E4.11**  
The DAEC has evaluated the need for augmented examination per this item number and has determined that the Torus should be examined twice per interval. Details are specified in Technical Approach and Position TAP-E002.
- NOTE 10 - Item Number E9.20**  
There are no components identified under this item number because the DAEC has been approved to use Option B of Appendix J. The "Performance Based Containment Testing Program" contains the requirements.
- NOTE 11 - Item Numbers B5.XX, B9.XX, C5.XX, and R-I**  
Risk-Informed methods are utilized as described in EPRI TR-112657B-A to determine scope of inspections for examination categories B-F, B-J, and C-F-2. The Risk-Informed scope has been combined into a new item number R-I for implementation in the second and third periods of the third interval.

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

Part K, page 1 of 1

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required) : N/A  | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**RELIEF REQUESTS**

The following are the relief requests and code cases that were used during the period of this Summary Report.

<u>RELIEF REQUESTS</u>	<u>DESCRIPTION</u>
NDE-R011	Use of Existing Calibration Blocks as an alternative
NDE-R012	Alternative Examination of Class 1 and 2 piping longitudinal seam welds
NDE-R014	Exemption from Appendix III calibration block notch dimensions
NDE-R015 Rev. 1	Use of the 1992 Addenda of ASME Section XI to govern repairs/replacements
NDE-R035	Alternative Requirements to Required Percentages of Examinations
NDE-R038	Alternative Requirements to VII-4240 "Annual Training"
NDE-R041	Use of the 1992 Edition of ASME Section XI for "Additional Examinations"
PR-002	Alternative Testing for Class2 Pressure Retaining Containment Penetrations connected to non-safety related piping systems
MC-R001	Qualification of Nondestructive Examination Personnel
MC-R002	Alternative to VT-3 for Seals and Gaskets
MC-R003	Alternative to Torque Test of Bolting
MC-R004	Preservice Examination of Reapplied Paint or Coatings
MC-R005	Visual Examination of Painted or Coated Containment Components Prior to Removal of Paint of Coatings
MC-R006	Successive examinations of Repaired Areas
<u>CODE CASE #</u>	<u>DESCRIPTION</u>
N-416-1 (PR-004)	Alternative pressure testing requirements for welded repairs or installation or replacement items by welding, Class 1, 2, and 3.
N-491 (TAP-I008)	Alternative rules for examination of Class 1, 2, 3 and MC component supports
N-508-1 (NDE-R033)	Rotation of Serviced Snubbers and Pressure Relief Valves for the Purpose of Testing
N-516-1 (NDE-R042)	Underwater Welding
N-546 (PR-008)	Alternative requirements for Qualification of VT-2 Examination Personnel
N-598 (NDE-R035)	Alternative Requirements to Required Percentages of Examinations

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
May 28, 2001 through April 20, 2003**

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**Attachment 2 to NG-03-0509  
ASME Section XI Summary Report  
Duane Arnold Energy Center  
Refueling Outage 18 (Period 3)**

25 Years of



Rock Solid Performance

***ASME Section XI Summary Report***

***Duane Arnold Energy Center***

***Refueling Outage 18***

***(Period 3)***

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

**DUANE ARNOLD ENERGY CENTER**

**UNIT #1 PALO, IOWA**

**Commercial Service Date: February 1, 1975**

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION SUMMARY REPORT**

**March 31, 2003 through April 20, 2003**

**Dated: April 20, 2003**

**OWNER:**

**ALLIANT ENERGY**

**P.O. Box 351**

**Cedar Rapids, Iowa 52406**

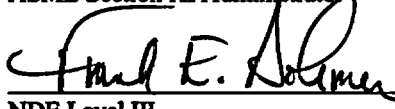
Prepared by:

  
ASME Section XI Administrator

Date:

7/16/2003

Reviewed by:

  
NDE Level III

Date:

7-16-03

Reviewed by:

  
Program Engineering Staff

Date:

7-16-03

Reviewed by:

  
Equipment Reliability Supervisor

Date:

7/16/03

Concurred by:

  
Program Engineering Manager

Date:

7-17-03



**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

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B	Certificate of Inservice Inspection	Pages 1-3
C	Abstract	Page 1
D	Table of Component and Weld Examination Identification Records	Pages 1-4
E	Table of Additional and Successive Examinations Identification Records	Page 1
F	Abstract of ASME Section XI Repairs and Replacements	Page 1
G	Form NIS-2's	Page 1
H	Abstract of Conditions Noted and Corrective Measures Taken	Page 1
I	ISI Figures and Isometrics	Pages 1-52
J	Status of Work for Third Ten Year Interval	Pages 1-4
K	Listing of Relief Requests and Code Cases Utilized	Page 1

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

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## Part A, Page 1 of 2

(12/82) This form (E00029) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10010

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part A, Page 2 of 2

**FORM NIS-1 (back)**

8. Examination Dates 3/31/03 to 4/20/03 9. Inspection Interval from 11/01/96 to 11/01/05

10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval.

Refer to Part C, Part D, and Part J.

11. Abstract of Conditions Noted

Refer to Part H.

12. Abstract of Corrective Measures Recommended and Taken

Refer to Part H.

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

Date July 17 2003

Signed Dean Curtland By Dean Curtland - Engineering Director

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

**CERTIFICATE OF INSERVICE INSPECTION**

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Iowa and employed by HSB CT of Hartford CT have inspected the components described in this Owner's Data Report during the period 3/31/03 to 04/20/03, 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 Data Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Data 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.

Date 7-17 2003.

JL  
Inspector's Signature

Commissions NB D3294<sup>N1</sup> 1496<sup>IN</sup>  
National Board, State, Province and No.

N1  
as for  
7/17/2003

\* Note - Other owners are Central Iowa Power Cooperative and Corn Belt Power Cooperative.

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

**Part B, page 1 of 3**

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required) : N/A  | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**CERTIFICATE OF INSERVICE INSPECTION**

**COMPONENTS EXAMINED:**

**Reactor Pressure Vessel :**

Manufacturer: Chicago Bridge and Iron  
Post Office Box 13308  
Memphis, TN 38113

National Board Number 3663, Mfr. Serial Number 3-4833

Refer to Part A, Page 1, form NIS-1, Owners Data Report for Inservice Inspections.

**Piping :**

Manufacturers, sizes, part numbers and locations are noted and traceable through the piping isometric and piping instrumentation drawings (P&ID). Installation contractor, fabricator, systems P&ID's and Isometric drawings are listed below.

**Constructor :**

Bechtel Power Co.  
P.O. Box 3865  
San Francisco, CA 94119

**Fabricator -**

Southwest Fabricating and Welding Co.  
P.O. Box 9449  
Houston, TX 77011

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part B, page 2 of 3

- |   |   |   |
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**CERTIFICATE OF INSERVICE INSPECTION**

**COMPONENTS EXAMINED:**

<b>CLASS 1</b>
----------------

Component	Iso No
Vessel Stud and Ligament	1.1-05
Main Steam	1.2-01/-02
Feedwater	1.2-05
Core Spray	1.2-08
High Pressure Coolant Injection	1.2-09
Reactor Water Cleanup	1.2-11A
CRD Return	1.2-12A
Residual Heat Removal	1.2-15
Recirculation System	1.2-19A/-19B/-20/-21B
Head Vent	1.2-24
Standby Liquid Control	1.2-27
Recirculation Pump	1.3-03

<b>IVVI</b>
-------------

Component	Iso No
Top Head Assembly	VS-1-6
Core Spray Bracket	VS-1-26
Feedwater	VS-1-27
Guide Rod Bracket	VS-1-28
Steam Dryer Support Brackets	VS-1-29
Steam Dryer Hold-Down Brackets	VS-1-30
Surveillance Specimen Bracket	VS-1-31

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part B, page 3 of 3

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
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| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**CERTIFICATE OF INSERVICE INSPECTION**

**COMPONENTS EXAMINED:**

<b>IVVI</b>
-------------

Component	Iso No
Jet Pump Riser Support Pad	VS-1-34
Shroud Support Assembly	VS-2-10
Ledge Segment Plates	VS-2-11
Core Plate	VS-3-2
Per. Fuel Support	VS-3-9
Top Guide	VS-4-1
Sample Holder	VS-10-2
CRD Guide Tube	VS-12-4

<b>CLASS 2</b>
----------------

Component	Iso No
RHR Heat Exchanger	2.1-01
Residual Heat Removal	2.2-32/-33/-36/- 37A/-39/-41/-43
High Pressure Coolant Injection	2.2-44/-45/-46
Core Spray	2.2-49/-52B
Main Steam	2.2-53/-55/-57
Scram Discharge	2.2-60/-61
Reactor Core Isolation Cooling	2.2-62



**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

Part C, page 1 of 1

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
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| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**CERTIFICATE OF INSERVICE INSPECTION**

**ABSTRACT:**

The Inservice Inspection addressed in this report was performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI 1989 Edition, No Addenda, and the Duane Arnold Energy Center Updated Final Safety Analysis Report. The inspections were performed utilizing Non-Destructive Examination Techniques (i.e., UT, PT, MT, etc.). The examinations were conducted during the period of March 31, 2003 through April 20, 2003. The specific details and associated records of the examinations are on file at Interstate Power and Light Company.

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part D, page 1 of 4

- |   |   |   |
|---|---|---|
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| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS**

CLASS 1						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
RPV Stud/Nut and Ligaments	CLSR HD-LGMNTS (41-60)	I03002	UT	1.1-05	B-G-1	Accepted
	CLSR HD-NUTS (41-60)	I03002	VT-1	1.1-05	B-G-1	Accepted
	CLSR HD-STUDS (41-60)	I03002	UT	1.1-05	B-G-1	Accepted
	CLSR HD-WSHRS (41-60)	I03002	VT-1	1.1-05	B-G-1	Accepted
Main Steam	CV4413-BOLTING	I03117	VT-1	1.2-01	B-G-2	Accepted
	CV4413	I03116	VT-3	1.2-01	B-M-2	Accepted
	MSA-K011B	I03003	VT-3	1.2-01	F-A	Accepted
	MSB-K019	I03004	VT-3	1.2-02	F-A	Accepted
Feedwater	FWB-K020A	I03010	VT-3	1.2-05	F-A	Accepted
Core Spray	CSB-K010	I03018	VT-3	1.2-08	F-A	Accepted
High Pressure Coolant Injection	PSA-K018	I03020	VT-3	1.2-09	F-A	Accepted
Reactor Water Cleanup	CUA-K013AA	I03021	VT-3	1.2-11A	F-A	Accepted
	CUA-K014A	I03022	VT-3	1.2-11A	F-A	Accepted
CRD Return	CRA-K026	I03032	VT-3	1.2-12A	F-A	Accepted
RHR	RHC-K008A	I03033	VT-3	1.2-15	F-A	Accepted
	RHC-K013	I03034	VT-3	1.2-15	F-A	Accepted
						By Evaluation CE0670 & CE00707)
Recirculation System	RCA-K009	I03039	PT	1.2-19A	B-K	Accepted
	RCA-K009	I03039	VT-3	1.2-19A	F-A	Accepted
	RDA-K017	I03040	VT-3	1.2-19B	F-A	Accepted
	RMA-K009	I03042	VT-3	1.2-20	F-A	Accepted
	RDB-K022	I03055	VT-3	1.2-21B	F-A	Accepted
Head Vent	HVA-FLG-BOLTING	I03056	VT-1	1.2-24	B-G-2	Accepted
SBLC	LCA-K007A	I03061	VT-3	1.2-27	F-A	Accepted
Recirculation Pump	RPB-K001	I03062	VT-3	1.3-03	F-A	Accepted
	RPB-K001 (LUGS)	I03062	PT	1.3-03	B-K	Accepted
	RPB-K006	I03063	VT-3	1.3-03	F-A	Accepted

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part D Page 2 of 4

- |   |   |   |
|---|---|---|
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| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS**

CLASS 1						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
Reactor Vessel Internals	VESSEL HEAD	I03064	VT-3	VS-1-6	B-N-1	Accepted
	CSB WELDS-150°	I03064	VT-3	VS-1-26	B-N-2	Accepted
	FWB WELDS-SE45°	I03064	VT-3	VS-1-27	B-N-2	Accepted
	FWB WELDS-SW135°	I03064	VT-3	VS-1-27	B-N-2	Accepted
	GRB WELDS-0° AZ	I03064	VT-3	VS-1-28	B-N-2	Accepted
	GUIDE ROD BRT(0)	I03064	VT-3	VS-1-28	B-N-1	Accepted
	DSB-135°	I03064	VT-3	VS-1-29	B-N-2	Accepted
	DSB-45°	I03064	VT-3	VS-1-29	B-N-2	Accepted
	DHB-149°	I03064	VT-3	VS-1-30	B-N-2	Accepted
	DHB-31°	I03064	VT-3	VS-1-30	B-N-2	Accepted
	SH WELDS-108°-LW	I03064	VT-1	VS-1-31	B-N-2	Accepted
	SH WELDS-108°-UP	I03064	VT-3	VS-1-31	B-N-2	Accepted
	SH WELDS-36°-LW	I03064	VT-1	VS-1-31	B-N-2	Accepted
	SH WELDS-36°-UP	I03064	VT-3	VS-1-31	B-N-2	Accepted
	JPR-SUPP PAD-108°	I03064	VT-1	VS-1-34	B-N-2	Accepted
	JPR-SUPP PAD-216°	I03064	VT-1	VS-1-34	B-N-2	Accepted
	SHROUD LEDGE (180-360)	I03064	VT-3	VS-2-10	B-N-2	Accepted
	SHROUD LEDGE (180-360)	I03064	VT-3	VS-2-11	B-N-1	Accepted
	CORE PLATE	I03064	VT-3	VS-3-2	B-N-1	Accepted
	CSS-FUEL SUPP CAST	I03064	VT-3	VS-3-9	B-N-2	Accepted
	CSS-TOP GUIDE	I03064	VT-3	VS-4-1	B-N-2	Accepted
	SAMPLE HLDR-108°	I03064	VT-3	VS-10-2	B-N-1	Accepted
	CSS-CR GUIDE TUBE	I03064	VT-3	VS-12-4	B-N-2	Accepted

CLASS 1 PRESSURE TESTS						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
Class 1 System	Leakage Test	I03001	VT-2	ISINO-P	B-P	Accepted

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part D Page 3 of 4

- |   |   |   |
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| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS**

CLASS 2						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
Residual Heat Removal Heat Exchanger	HEA-CA-1	I03065	UT	2.1-01	C-A	Accepted
	HEA-CB-2	I03066	MT UT	2.1-01	C-B	Accepted Accepted
	HEA-CB-2 (Inner Rad)	I03066	UT	2.1-01	C-B	Accepted
	HEA-CC-7	I03067	MT	2.1-01	C-C	Accepted
			VT-3	2.1-01	F-A	Accepted
	HEA-CC-8 (04)	I03068	VT-3	2.1-01	F-A	Accepted
Residual Heat Removal	RHA-CE009	I03069	MT	2.2-32	C-C	Accepted
			VT-3		F-A	Accepted
	RHA-CE027	I03070	VT-3	2.2-32	F-A	Accepted
	RHB-CE050	I03071	VT-3	2.2-33	F-A	Accepted By Evaluation (AR CA026894 )
	RHE-CE036	I03072	VT-3	2.2-36	F-A	Accepted
	RHF-CE078	I03073	VT-3	2.2-37A	F-A	Accepted
	RHI-CE052	I03074	VT-3	2.2-39	F-A	Accepted
	RHK-CE008A	I03075	VT-3	2.2-41	F-A	Accepted
	RHM-CE005	I03076	VT-3	2.2-43	F-A	Accepted
High Pressure Coolant Injection	HPA-CE016	I03077	VT-3	2.2-44	F-A	Accepted
	HPB-CE013	I03079	VT-3	2.2-45	F-A	Accepted
	HPB-CE072	I03080	VT-3	2.2-45	F-A	Accepted
	HPC-CE059	I03081	VT-3	2.2-46	F-A	Accepted

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part D Page 4 of 4

- |   |   |   |
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| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS**

CLASS 2						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
Core Spray	CSB-CE029	I03083	VT-3	2.2-49	F-A	Accepted
			MT		C-C	Accepted
	CSB-CE064	I03084	VT-3	2.2-49	F-A	Accepted
	CSE-CE049A	I03085	VT-3	2.2-52B	F-A	Accepted
Main Steam	MSA-CE025	I03086	VT-3	2.2-53	F-A	Accepted
	MSC-CE029	I03087	VT-3	2.2-55	F-A	Accepted
	MSE-CE033	I03088	VT-3	2.2-57	F-A	Accepted
Scram Discharge	SDS-CE001A	I03089	VT-3	2.2-60	F-A	Accepted
	SDN-CE001A	I03090	VT-3	2.2-61	F-A	Accepted
Reactor Core Isolation Cooling	RCB-CE006	I03091	VT-3	2.2-62	F-A	Accepted
			MT		C-C	Accepted
	RCB-CE008	I03092	VT-3	2.2-62	F-A	Accepted

CLASS 2 PRESSURE TESTS						
Component	Description	ISI Report	Examination	ISI ISO	ASME XI Category	Results

THERE WERE NO CLASS 2 PRESSURE TESTS PERFORMED DURING THE THIRD PERIOD FOR THIS OUTAGE.

IWE COMPONENTS						
Component	Description	ISI Report	Exam Method	ISI ISO	ASME XI Category	Results
Drywell	DRYWELL STAB #6	I03110	VT-3	N/A	E-A	Accepted
	DRYWELL STAB #6 (Bolting)	I03110	VT-1	N/A	E-G	Accepted
	DW INT 742'-757' SW	I03108	VT-3	N/A	E-A	Accepted
	DW INT 757'-776' SW	I03106	VT-3	N/A	E-A	Accepted
	DW INT 776'-798' NE	I03107	VT-3	N/A	E-A	Accepted
	MOIST. BAR. 742' SW	I03109	VT-3	N/A	E-D	Accepted
	DW ACCESS HATCH	I03111	VT-1	N/A	E-G	Accepted
	TORUS BAY 15	I03112	VT-1	N/A	E-C	Accepted

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part E, page 1 of 1

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**ADDITIONAL EXAMINATION IDENTIFICATION RECORDS**

Class 1					
Component Examined	Previous ISI Report Number	ISI Report Number	Examination	ASME XI Category	Results

THERE WERE NO ADDITIONAL EXAMINATIONS PERFORMED DURING THE THIRD PERIOD THIS  
OUTAGE

**SUCCESSIVE EXAMINATION IDENTIFICATION RECORDS**

Class 1					
Component Examined	Previous ISI Report Number	ISI Report Number	Examination	ASME XI Category	Results

THERE WERE NO SUCCESSIVE EXAMINATIONS PERFORMED DURING THE THIRD PERIOD THIS  
OUTAGE



**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

**Part F, page 1 of 1**

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**ABSTRACT OF ASME SECTION XI REPAIRS AND REPLACEMENTS**

The repairs and replacements addressed in this report were performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 1992 with the 1992 Addenda (Ref. Relief Request NDE-R015 Rev. 1).

**THERE WERE NO ASME SECTION XI REPAIRS OR REPLACEMENTS COMPLETED UNDER THE THIRD PERIOD. ALL REPAIRS AND REPLACEMENTS WERE COMPLETED AND SUBMITTED UNDER THE SECOND PERIOD OF THE THIRD TEN YEAR INTERVAL SUMMARY REPORT.**

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

**Part G, page 1 of 1**

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**Form NIS-2's**

**THERE ARE NO NIS-2'S INCLUDED IN THIS THIRD PERIOD SUMMARY REPORT.  
THEY ARE INCLUDED IN THE SECOND PERIOD SUMMARY REPORT.**

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part H, page 1 of 1

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant Company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**ABSTRACT OF CONDITIONS NOTED AND CORRECTVIE MEASURES TAKEN:**

The corrective measures are addressed in this report and were performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 1992 with the 1992 Addenda (Ref. Relief Request NDE-R015 Rev. 1), and the Duane Arnold Energy Center Updated Final Safety Analysis Report. The corrective measures performed as Repairs or Replacements are listed in Part F of this report and are documented, using Form NIS-2, in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section XI, 1992, 1992 Addenda. Specific details and associated records of additional corrective measures are on file at Duane Arnold Energy Center. The corrective measures addressed were performed during the period of March 31, 2003 through April 20, 2003.

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

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**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

**Part I, page 1 of 52**

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required) : N/A  | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**ISI FIGURES AND ISOMETRICS**

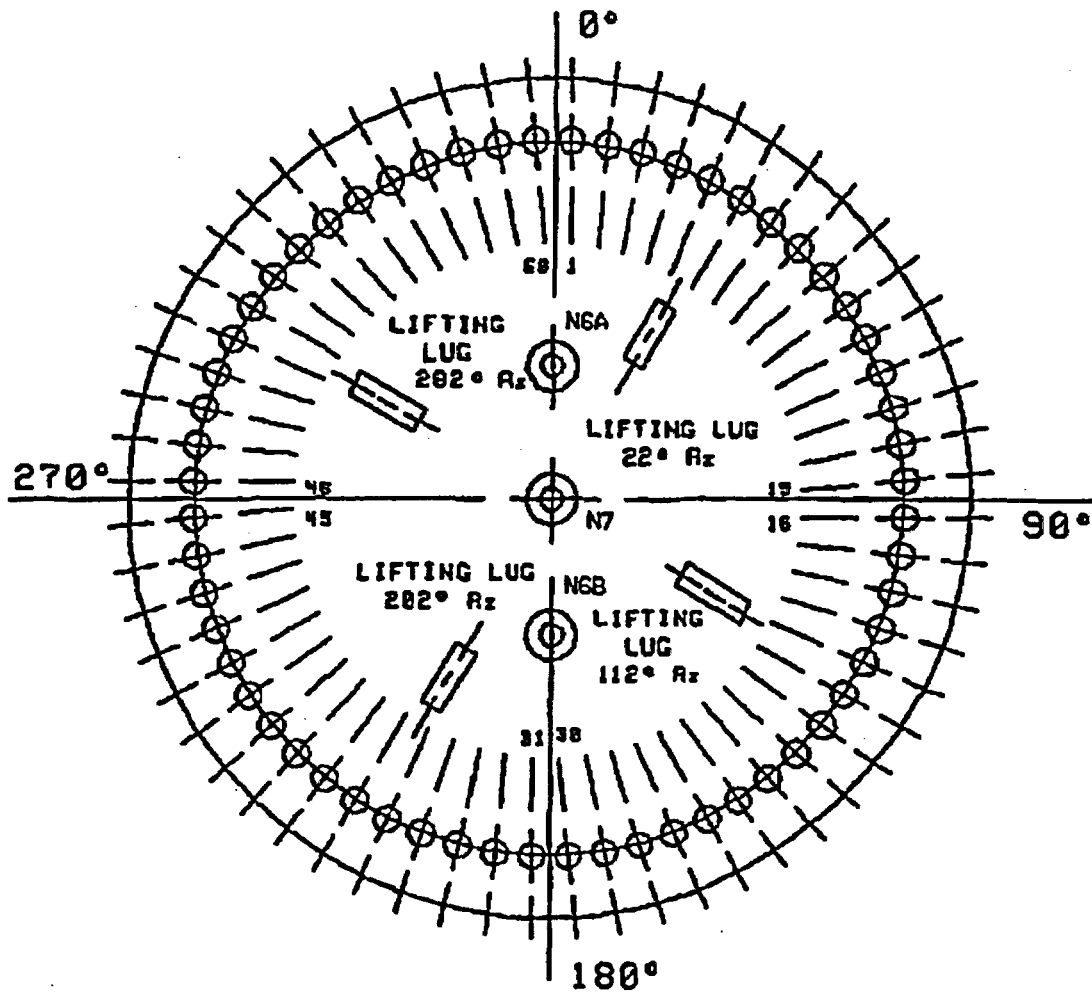
**PLEASE NOTE: ISI Figures and Isometrics are listed in Part B and Part D of this report**



**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

**Part I, page 2 of 52**

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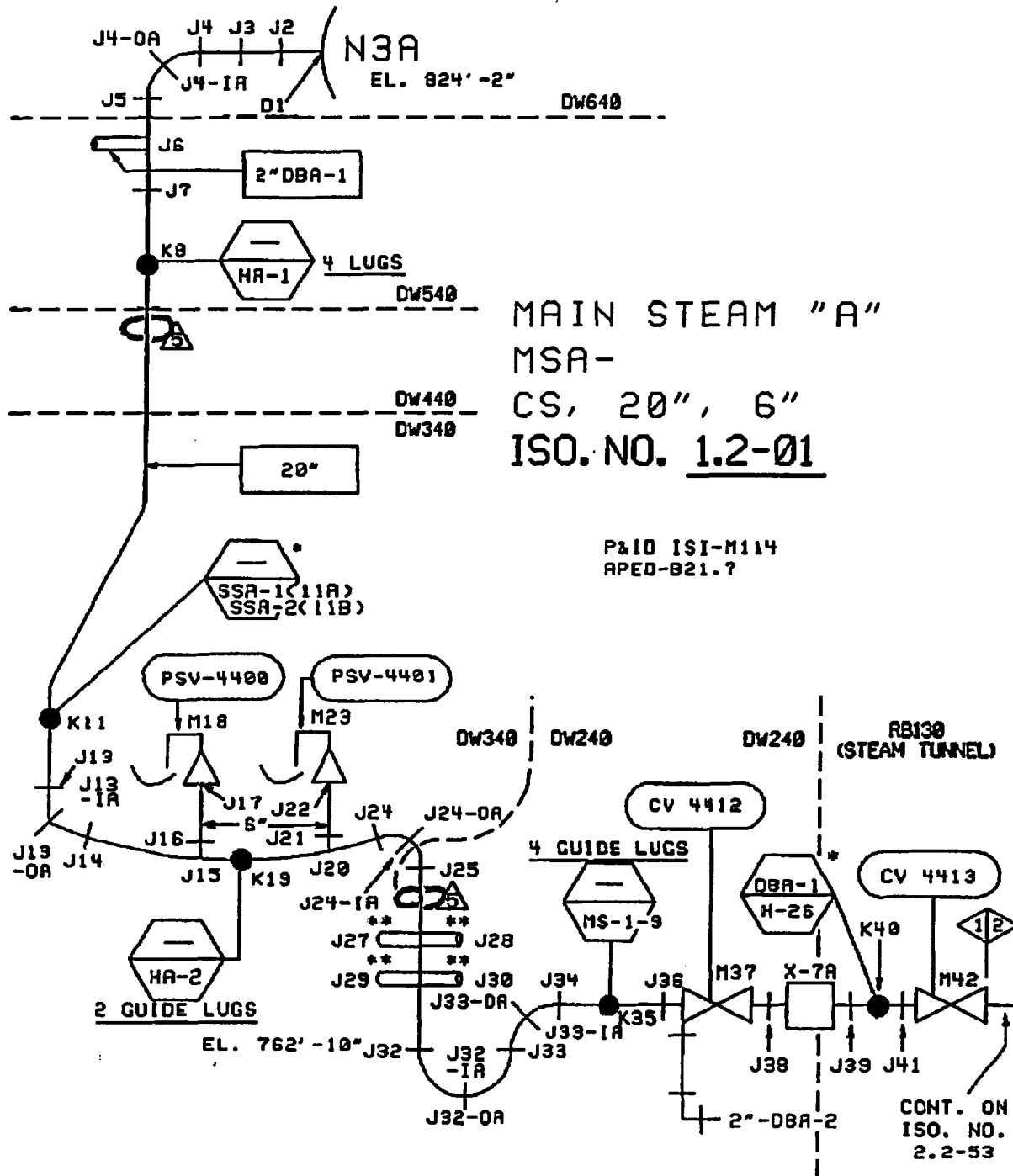
VESSEL STUD AND LIGAMENT LOCATION

Figure No. 1.1-05

PR-Pressure Retaining  
 -Studs  
 -Gaskets  
 -Washers  
 -Ligaments

## DRAWING RELEASE RECORD

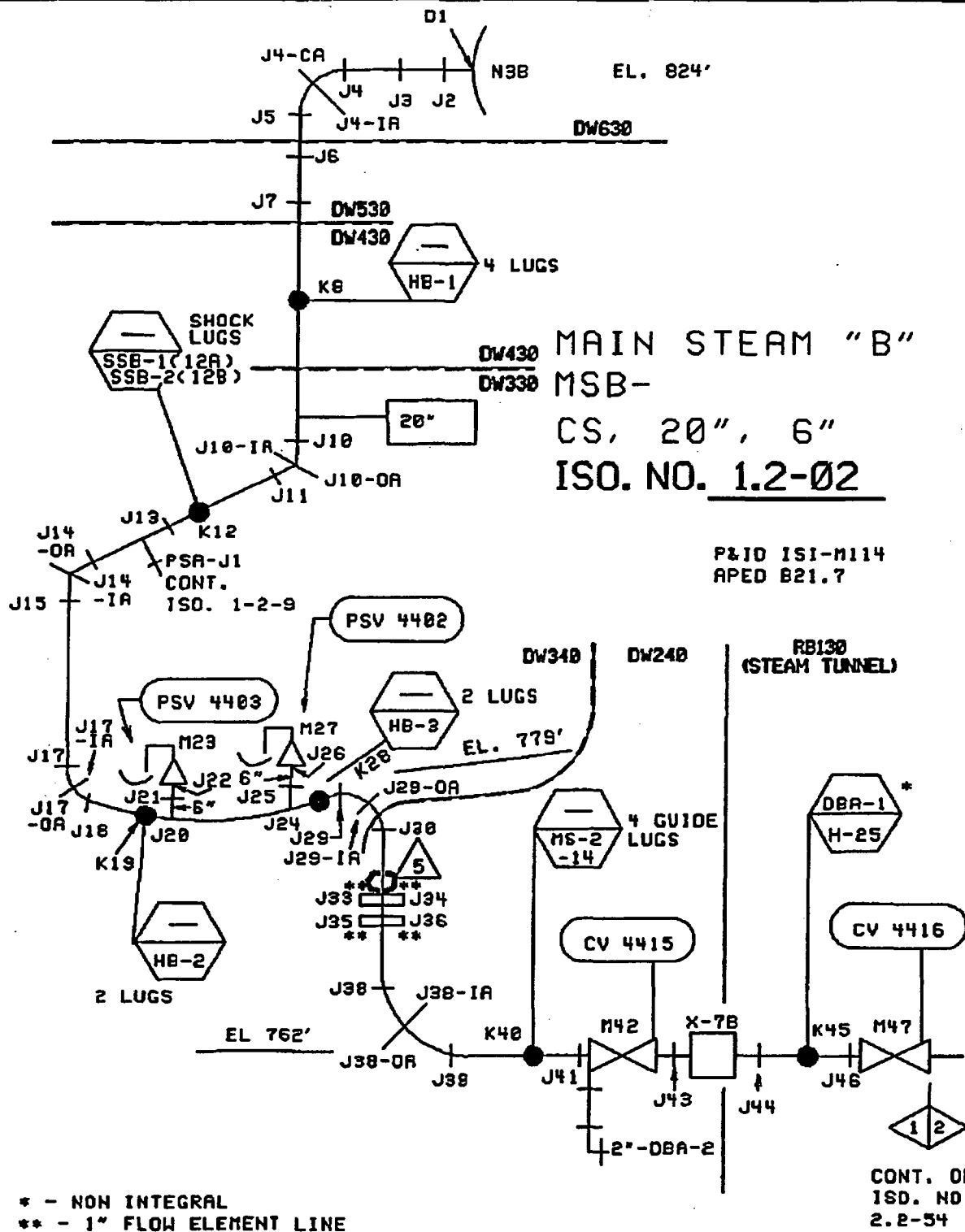
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	4-9-85	SHL	SHL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	8-24-88	DA	GP	KKM	ISO'S TO CAD FORMAT AS PER NC-83-0704
3	5-13-91	DA	GP	KKM	PCN "B" CORRECTLY IDENTIFIED LIFTING LUGS
4	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-16-95	DA	JDF	GP	DELETED DWG PER DURF-013
6	3/11/96	JAH	TAK	GP	RE-ISSUED PER DURF-0026



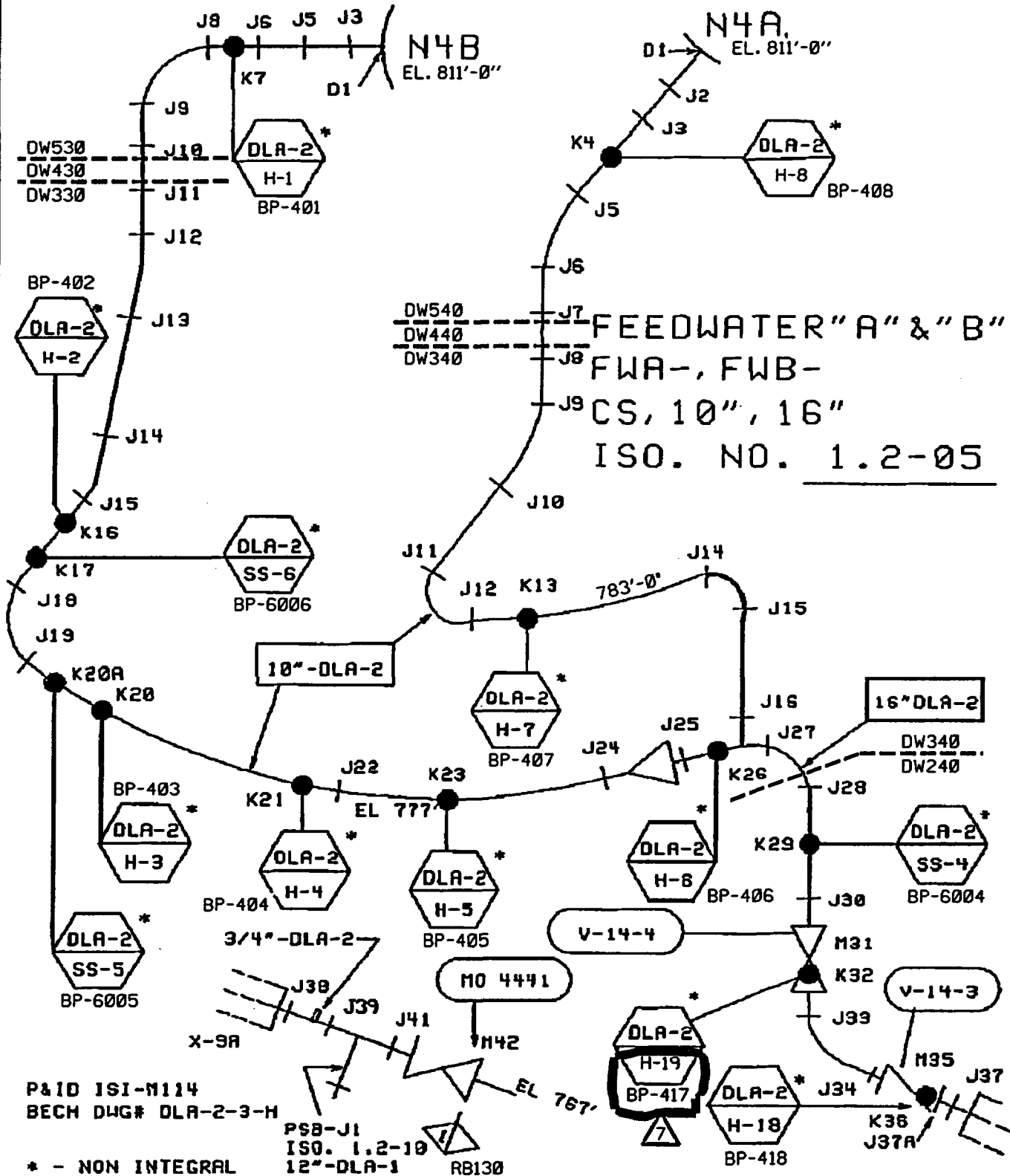
\* - NON INTEGRAL  
\*\* - 1" FLOW ELEMENT LINE

## DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-8-86	SNL	SNL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	DA	GP	ISO'S TO CAD FORMAT AS PER NG-89-8734
3	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1-18-98	TAK	JV	GP	REV. PER DUF-0018
5	3-21-98	JAH	DA	GP	REV. PER DUF-U0027

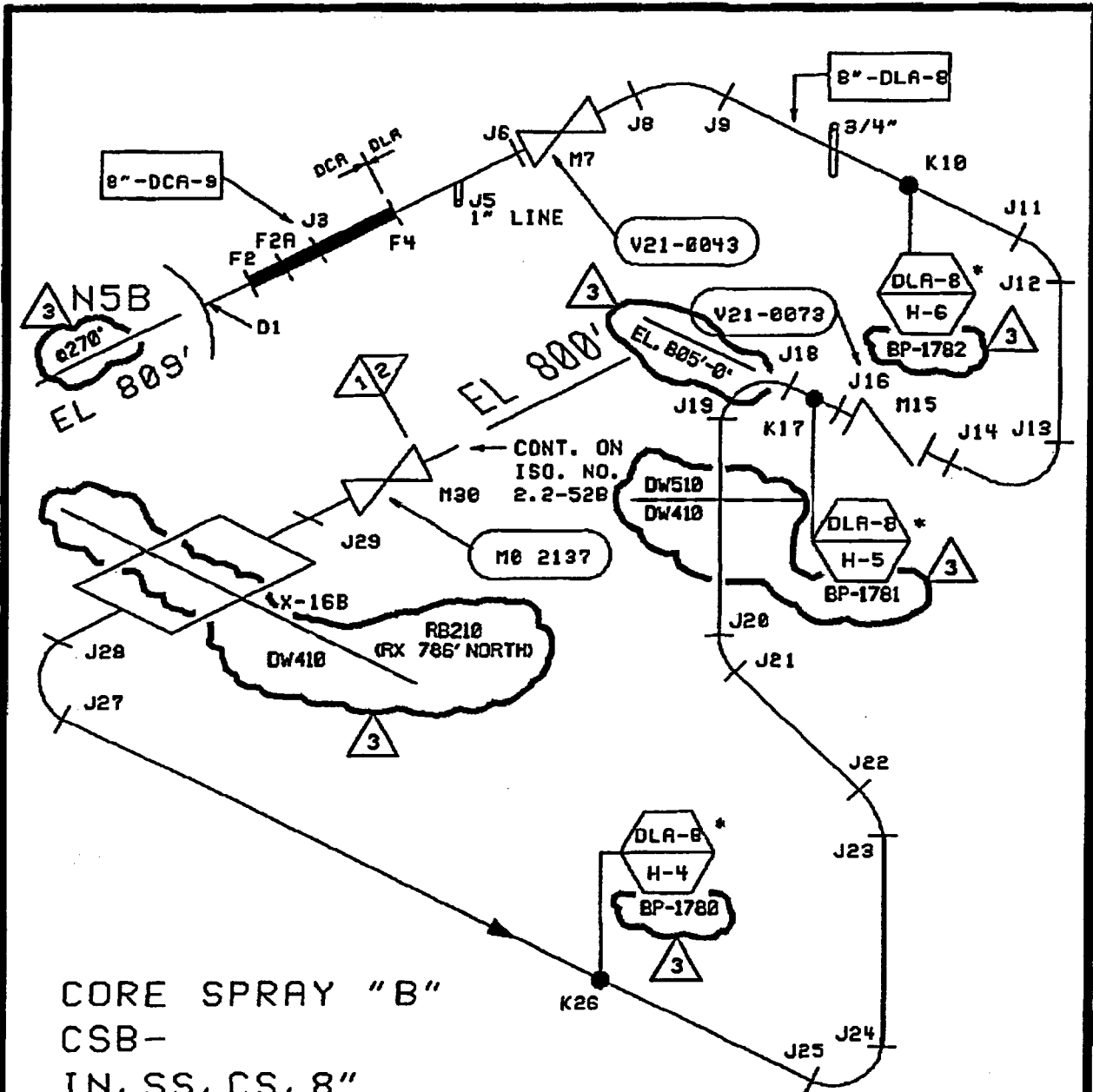


DRAWING RELEASE RECORD					
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	9-6-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	1-24-90	(Signature)	(Signature)	(Signature)	ISO'S TO CAD FORMAT AS PER NC-88-0784
3	7-22-94	DA	BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1-18-96	TAK	JW	GP	REV. PER DUF-0018
5	3-21-96	JAH	DA	GP	REV. PER DUF-U0027



## DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	6/4/99	DA	GP	FED	REVISED PER DUF-U0111
2	5-24-90	DA	GP	KKM	SO'S TO CAD FORMAT AS PER NG-83-8794
3	11-18-92	DA	GP	GP	REVISED PER ODC-2041
4	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	3-21-96	JAH	DA	GP	REVISED PER DUF-U0027
6	3/26/98	DA	TAK	GP	REVISED PER DUF-U0046



CORE SPRAY "B"  
CSB-  
IN, SS, CS, 8"  
ISO. NO. 1.2-08

P&ID ISI-M121  
BECH DWG# DLA-8-1-H

\* - NON INTEGRAL

#### DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	8-12-85	SHL	SHL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	DA	KRM	ISO'S TO CAD FORMAT AS PER NC-89-8794
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN

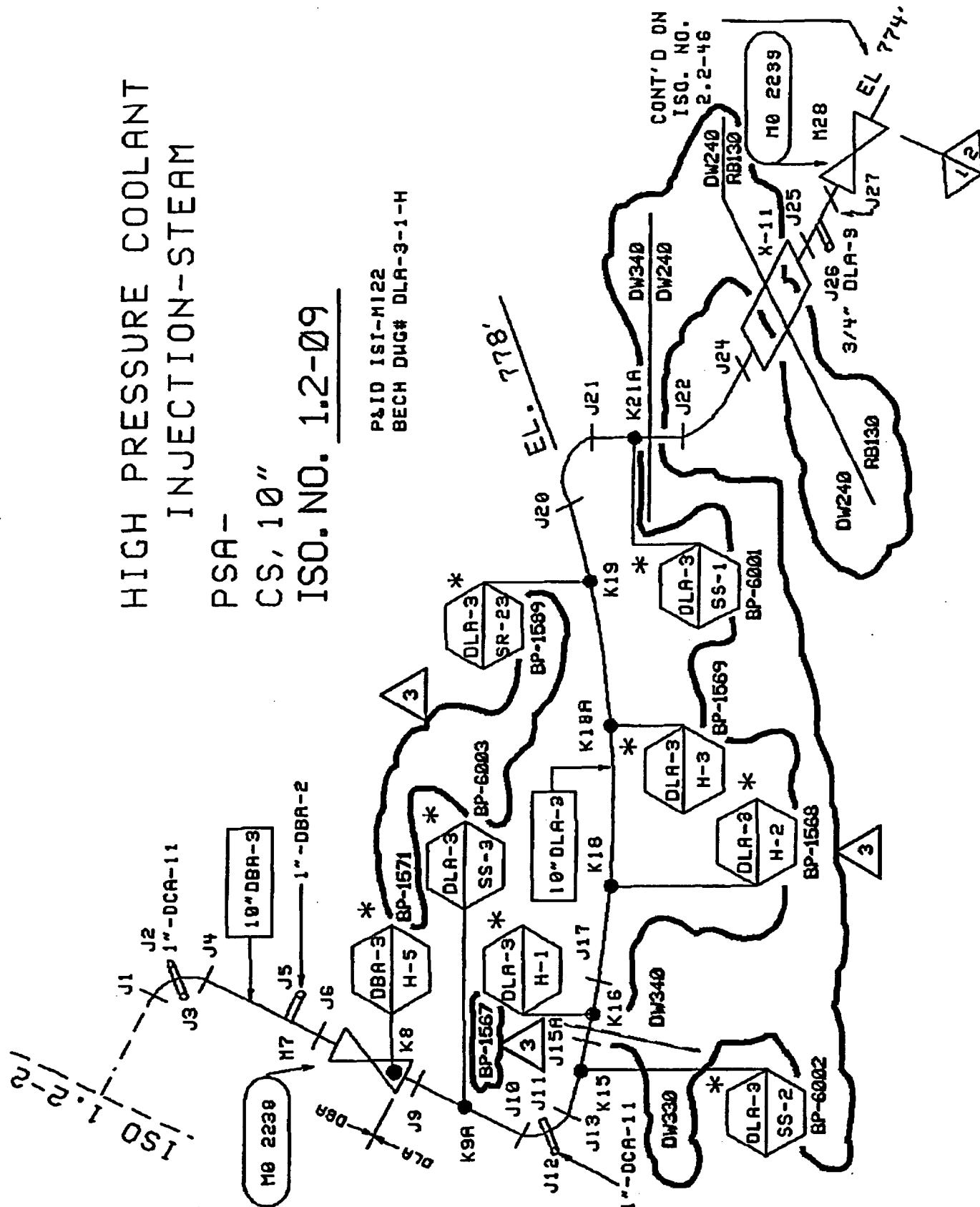
DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC

1  
5  
6

CS. 10"

ISO. NO. 1.2-09

P&ID ISI-M122  
BECH DWG# DLA-3-1-H



\* - NON INTEGRAL

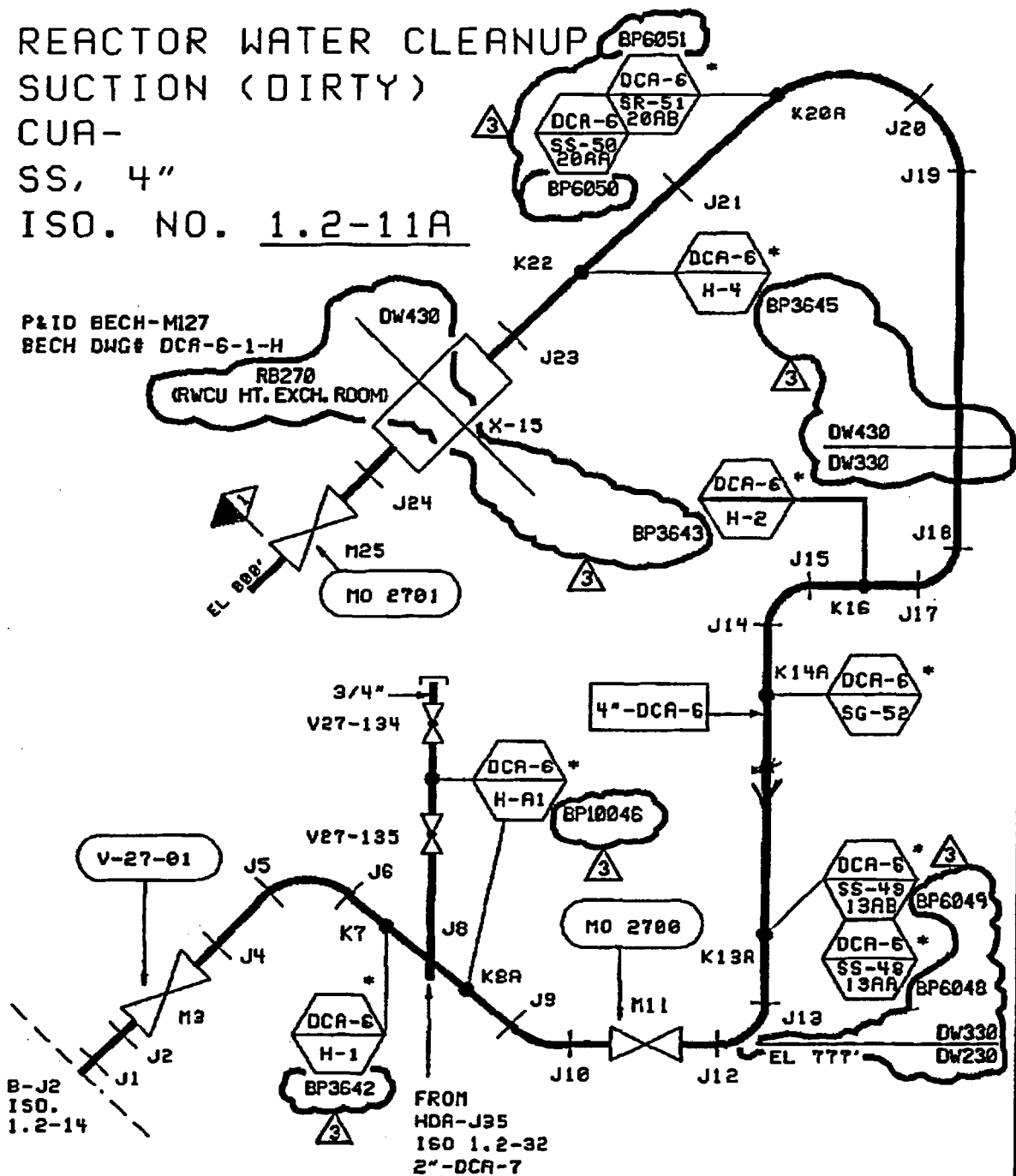
## PURPOSE

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-12-86	SNL	SNL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	4-24-90	<i>(Signature)</i>	<i>(Signature)</i>	<i>K2m</i>	ISO'S TO CAD FORMAT AS PER NG-89-0794
3	7-22-94	DA	BJB	GP	REVISED PER ISI INSPECTION WALKDOWN

REACTOR WATER CLEANUP  
SUCTION (DIRTY)  
CUA-  
SS, 4"  
ISO. NO. 1.2-11A

P&amp;ID BECH-M127

BECH DWG# DCA-6-1-H



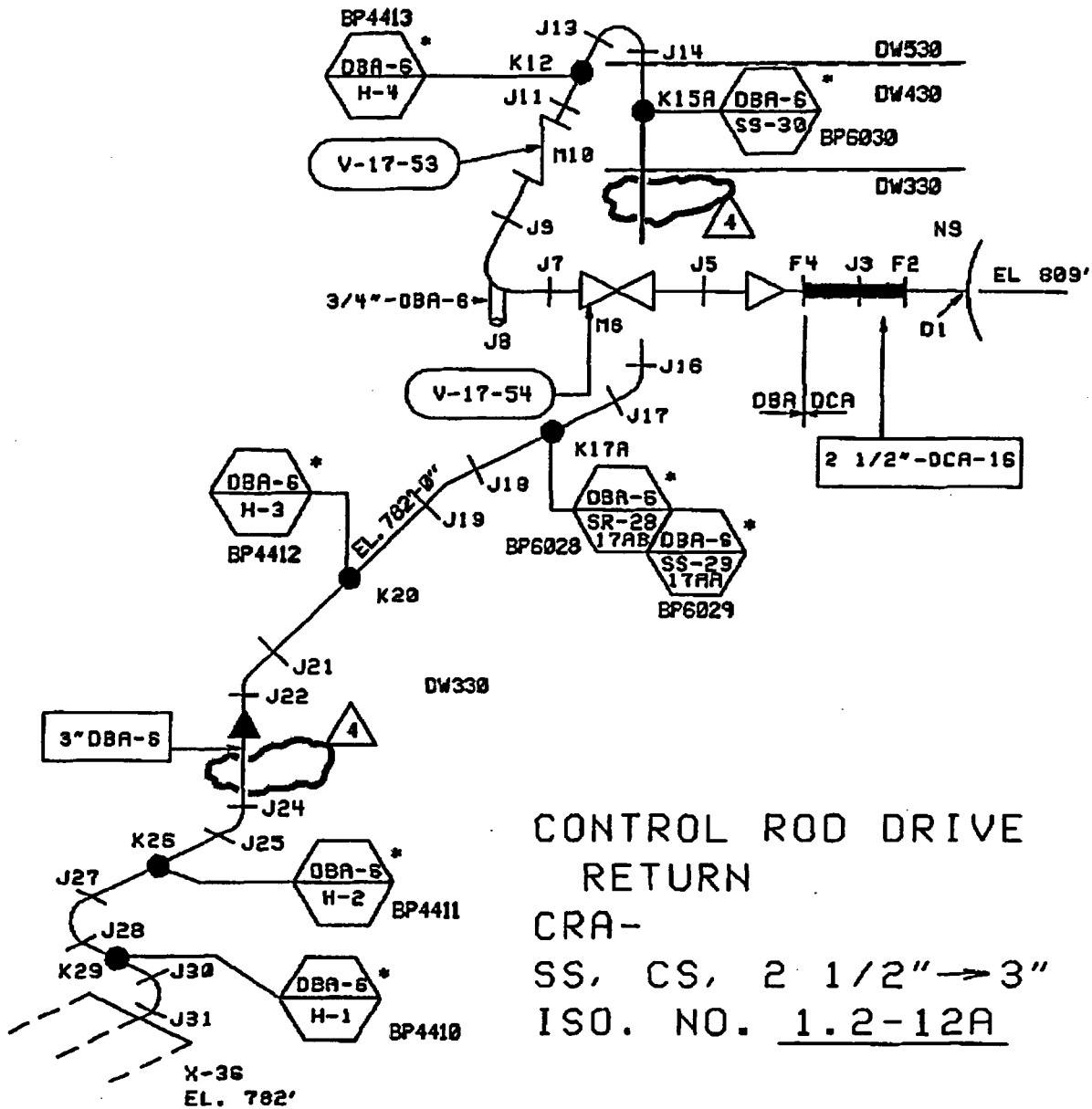
\* - NON INTEGRAL

## DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-13-86	SAL	SAL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	4-24-90	UB	UB	KKA	ISO'S TO CAD FORMAT AS PER HG-88-0794
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN

DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC





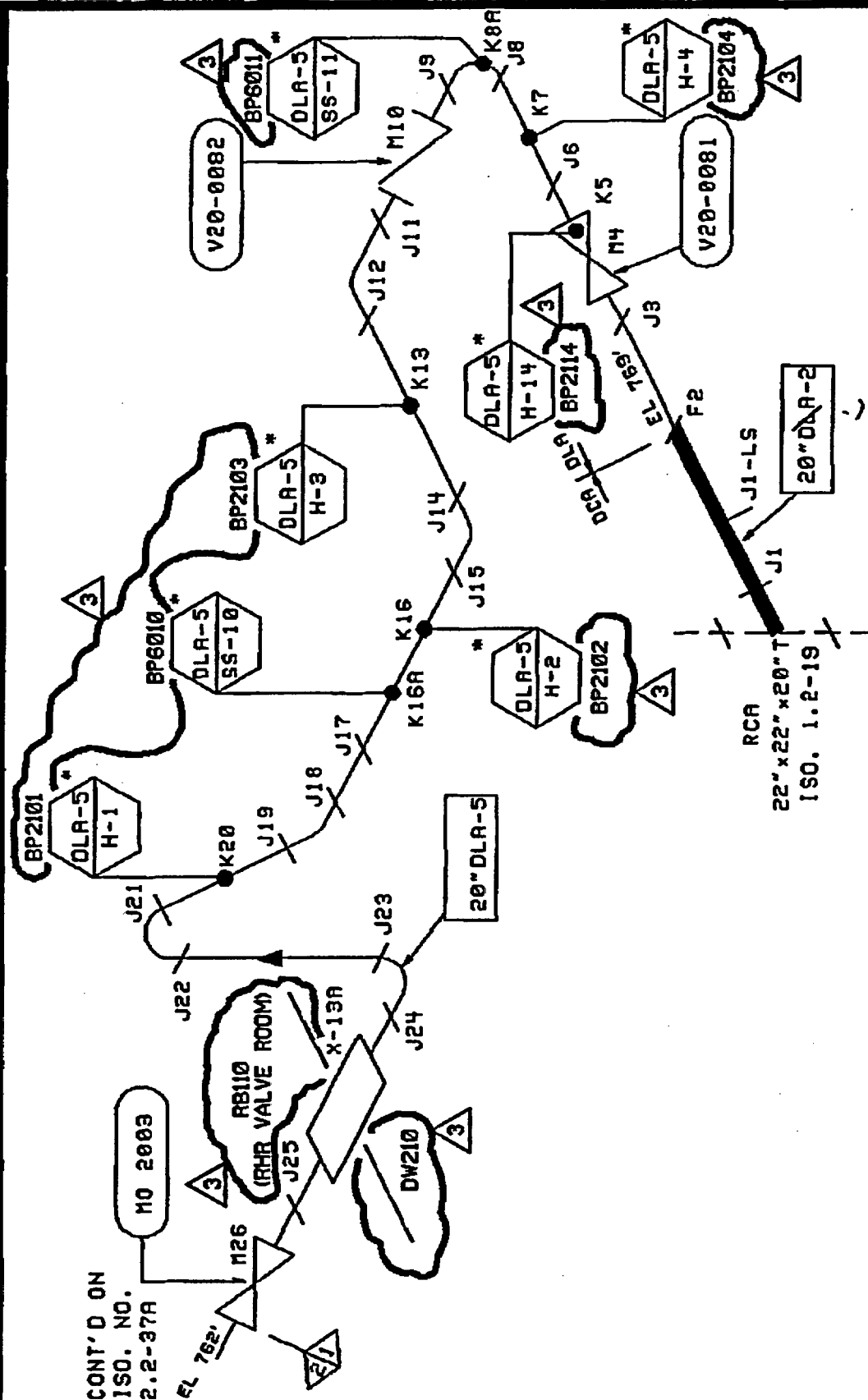
CONT. ON  
ISO. NO. 1.2-12B

PLS ISI-M117  
BECH. DWG# DBA-6-I-H

## DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-13-86	SNL	SNL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	1-21-90	DA	DA	K2	ISO'S TO CAD FORMAT AS PER NG-83-0784
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN
4	7-6-95	DA	JDF	GP	REVISED PER DUF-0013

DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC



RESIDUAL HEAT REMOVAL-20A

RHC-

SS, CS, 20"

ISO. NO. 1.2-15

\* - NON INTEGRAL

P&ID BECH-M120  
BECH DWG# OLA-5-1-H

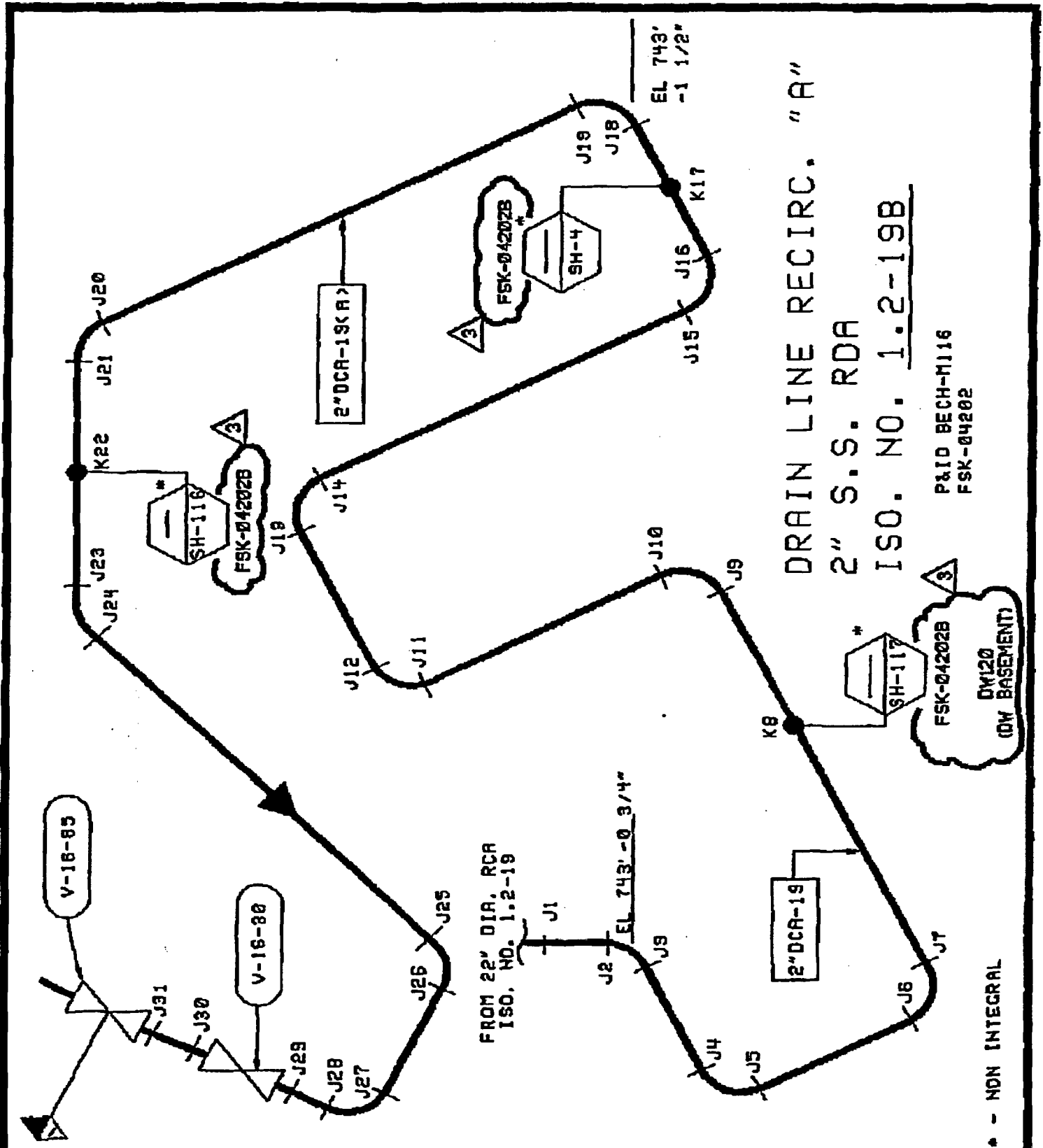
## DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-17-86	SHL	SHL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	JAH / FED	GP	ISO'S TO CAD FORMAT AS PER NG-89-0794
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN



**\* - HDH INTEGRAL**

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-19-86	SNL	SNL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	GP	KKM	ISO'S TO CAD FORMAT AS PER NC-89-0794
3	4-2-93	DA	GP	GP	ADDED FLANGE
4	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JDF	GP	REVISED PER DUF-0013
6	1-18-98	TAK	JW	GP	REV. PER DUF-0018



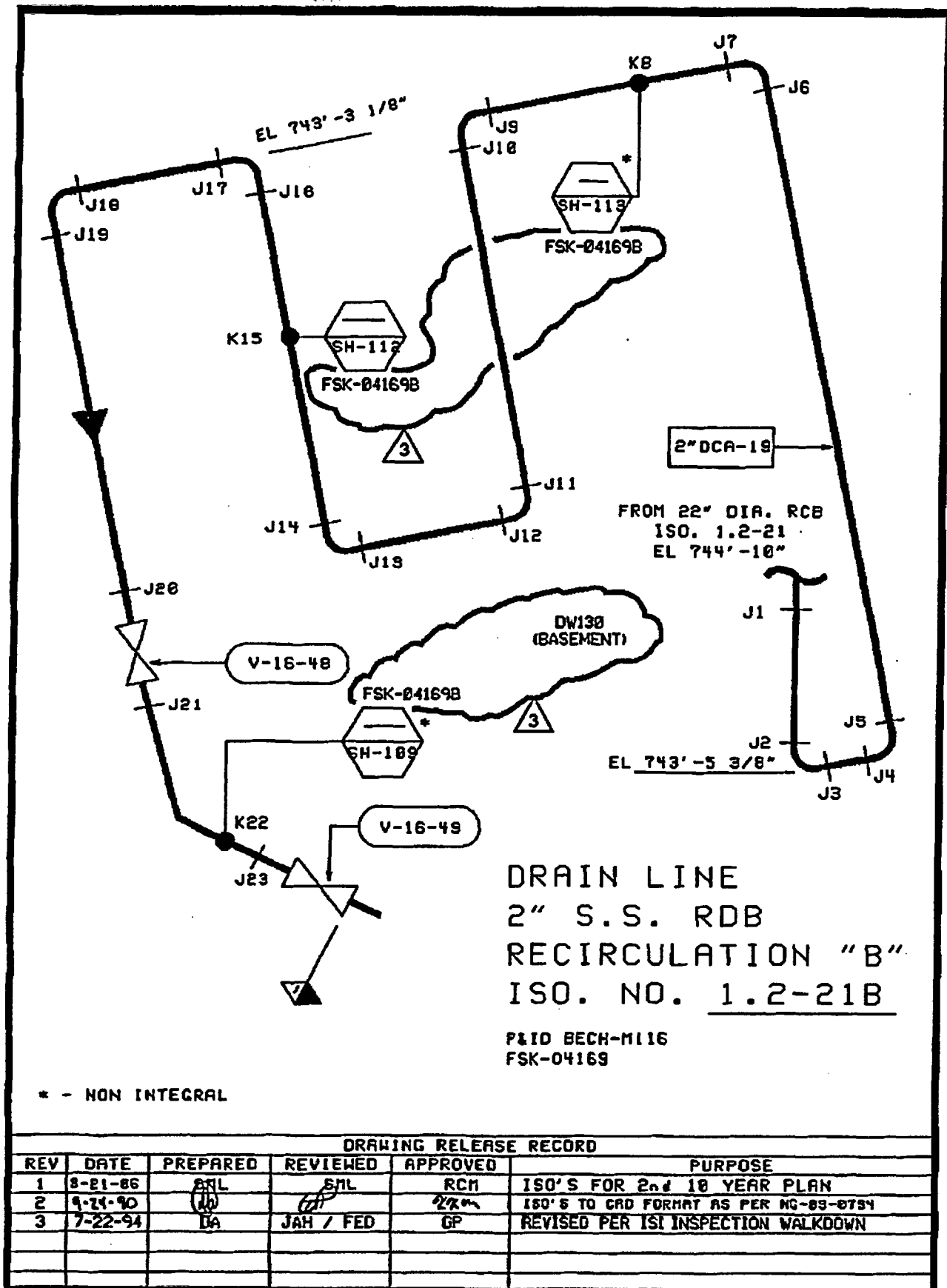
## DRAWING RELEASE RECORD

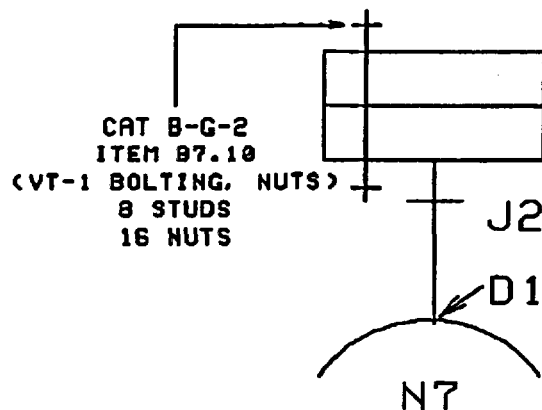
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-18-86	SNL	SNL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	GP	RCH	ISO'S TO CAD FORMAT AS PER HG-83-8784
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN

DRAWING RELEASE RECORD					PURPOSE
REV	DATE	PREPARED	REVIEWED	APPROVED	
1	3-20-86	SNL	SNL	RCN	ISO'S FOR 2nd 10 YEAR PLAN
2	4-24-90	(W) DA	DA	KRM	ISO'S TO CAD FORMAT AS PER NC-89-8794
3	7-22-94	DA	JAH / BUB	GP	REVISED PER ISI INSPECTION VALKHOON
4	1-18-96	TAK	JW	GP	REV. PER DURE-0018

RECIRCULATION MANIFOLD "A" & RISERS E, F, G, H  
RMA-, RRE-, RRF-, RRG-, RRH-  
SS, 16", 10"  
ISO. NO. 1.2-20

4  
PAID BECH-MI  
APED-B31-9





DW7  
(EXAMS PERFORMED  
ON REFUEL FLOOR)

3

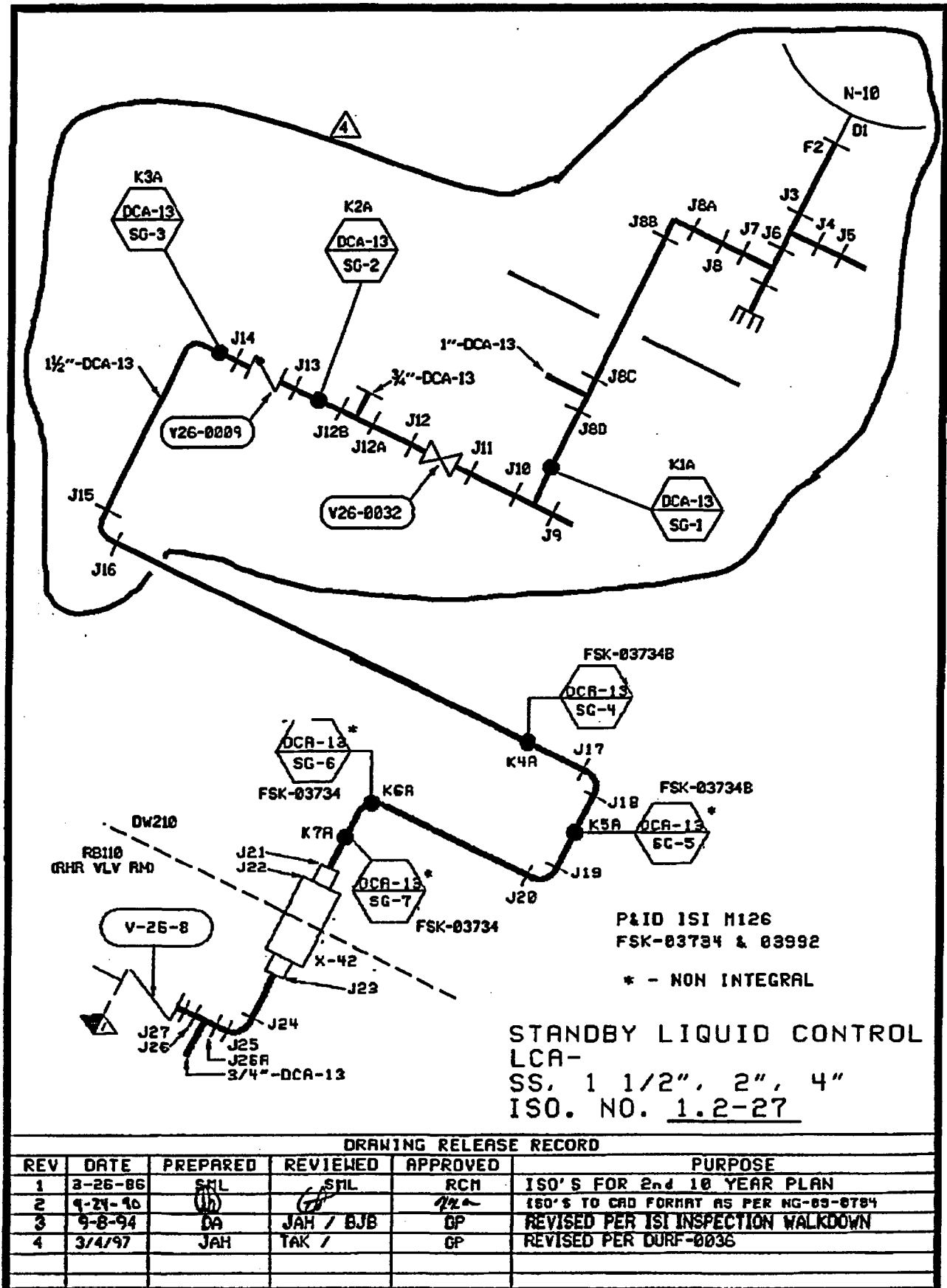
HEAD VENT  
HVA-  
CS, 4"  
ISO. NO. 1.2-24

P&ID BECH-M114  
APEO-811-2655-104-3

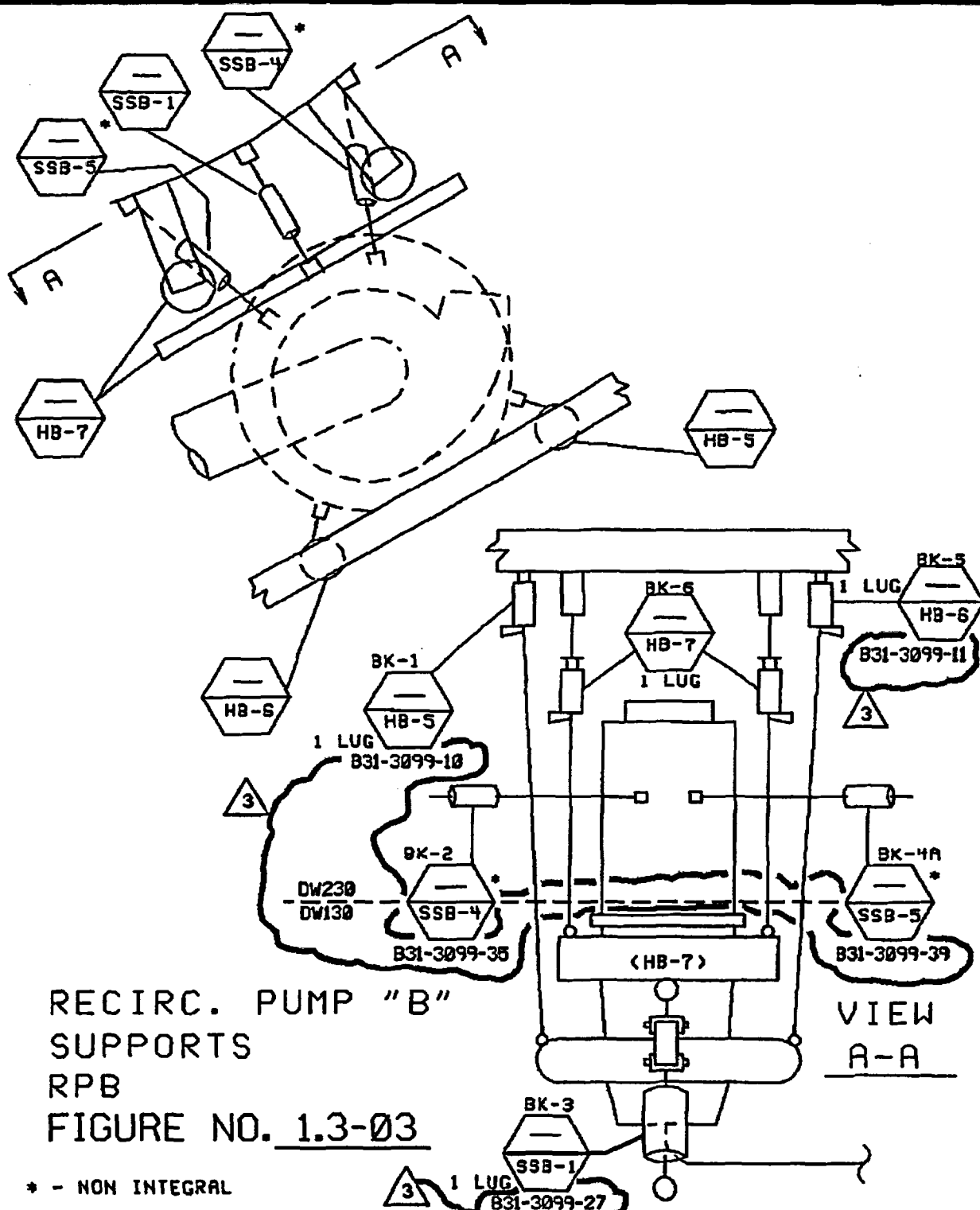
## DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-26-96	SML	SML	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	1-24-90	DA	DA	KRA	ISO'S TO CAD FORMAT AS PER HG-89-0794
3	7-22-94	DA	JAH /FED	GP	REVISED PER ISI INSPECTION WALKDOWN

DAEC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC



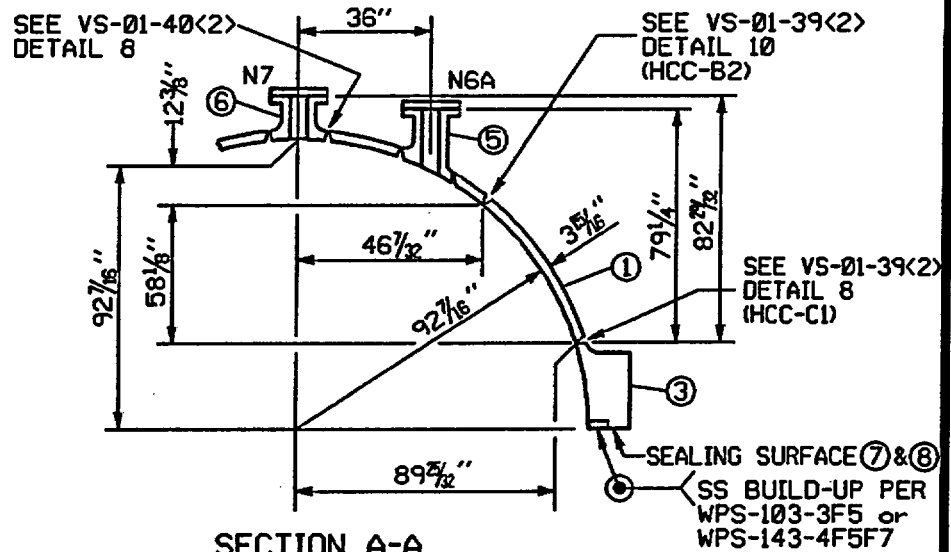




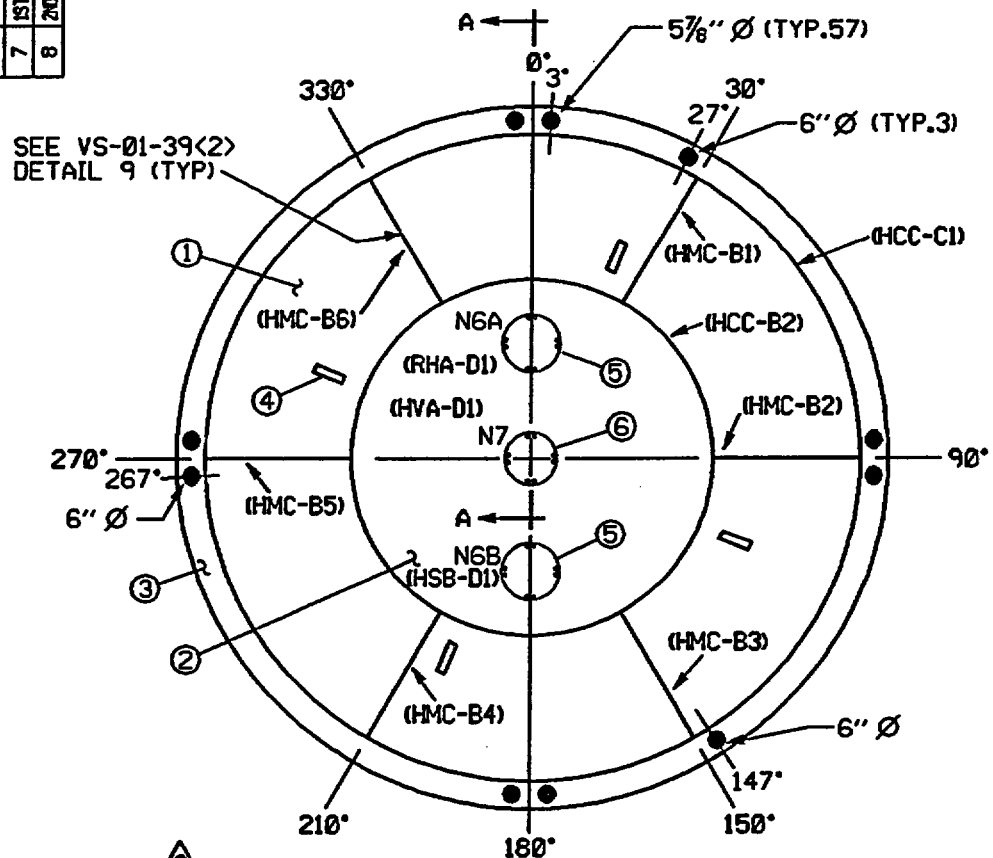
## DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	10-25-87	JRN	RCH	REL	ISO'S FOR 2nd 10 YEAR PLAN
2	9-14-90	(10)	GP	REL	ISO'S TO CAD FORMAT AS PER NG-89-0734
3	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN

NO.	DESCRIPTION	BILL OF MATL.	PROCD.
1	SIDE PLATE	SA533 CLASS 1 GR.B	
2	DOLLAR PLATE	SA533 CLASS 1 GR.B	
3	HEAD FLANGE	A-508 CLASS 2	
4	LIFTING LUG	(SEE VS-01-37)	
5	HEAD SPRAY & INSTR. NOZZ.	(SEE VS-01-15)	
6	VENT NOZZ.	(SEE VS-01-16)	
7	1ST LAYER SEAL SURFACE CLADDING 30%L		
8	2ND & 3RD LAYER SEAL SURFACE CLADDING 30%L		



SECTION A-A



PLAN VIEW

REFERENCE DRAWINGS:

APED-B11-2655-335, APED-B11-2655-211,  
APED-B11-2655-215

NO.	DATE	REVISION	DRW. CHKD.	ENGR.	VER.	
3	12/16/97	REVISED PER DURE-0044	JW	TAK	GP	FED
2	8/8/95	REVISED PER DURE-0011	DA	GD	SS	SS
1	12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP	SS

IES:

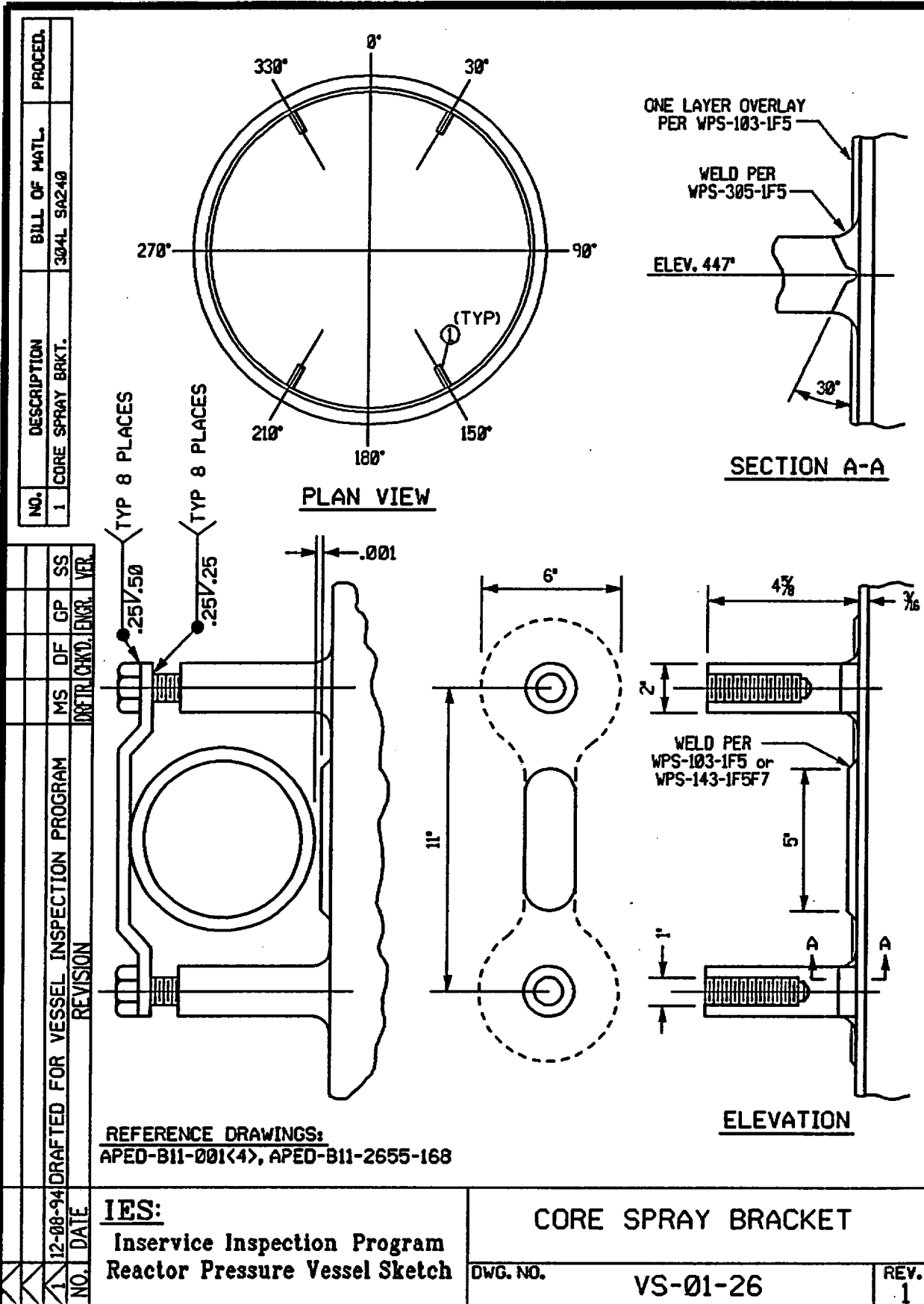
Inservice Inspection Program  
Reactor Pressure Vessel Sketch

TOP HEAD  
ASSEMBLY

DWG. NO.

VS-01-06

REV.  
3



PLAN VIEW

3 1/2"

2 3/4"

WELD PER  
WPS-305-1F5

OVERLAY  
WPS-103-1F5

PLAN

**REFERENCE DRAWINGS:**  
**APED-B11-001<4>, APED-B11-2655-169**

**IES:**  
**Inservice Inspection Program**  
**Reactor Pressure Vessel Sketch**

## FEEDWATER SPARGER BRACKET

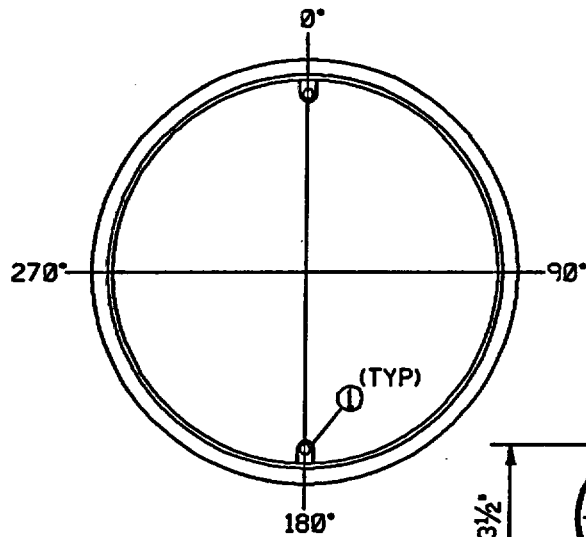
**OWG. NO.**

**VS-01-27**

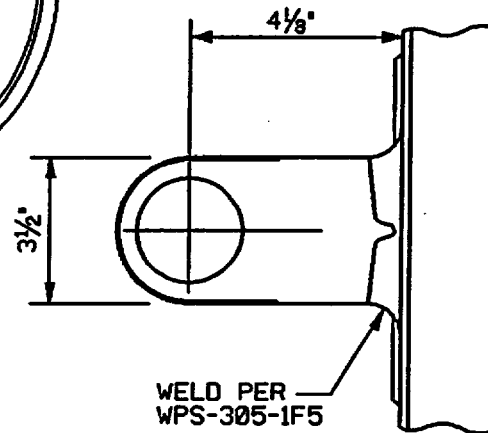
REV.  
2

NO.	DATE	REVISION	DATE	BY	VER.
1	12-08-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP
2	8/8/95	REVISED PER DURE-0011	DA	GD	SS

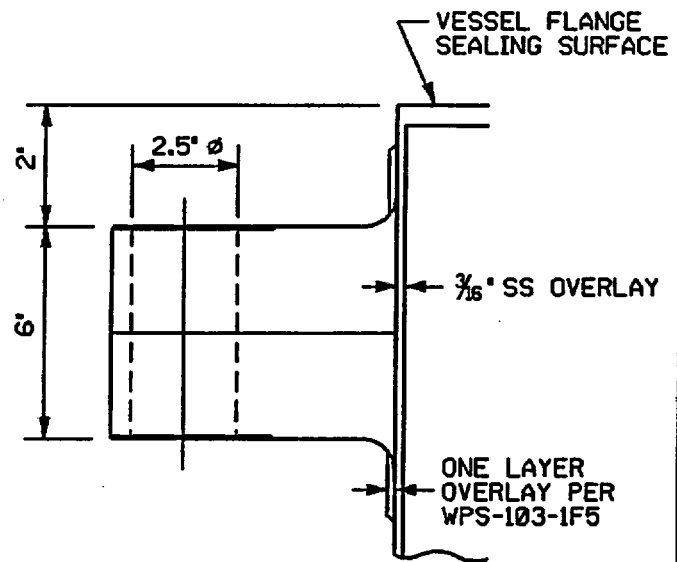
NO.	DESCRIPTION	BILL OF MATL.	PROCD.
1	GUIDE ROD BRACKET	304L SA240	



PLAN VIEW



PLAN VIEW



ELEVATION

REFERENCE DRAWINGS:  
APED-B11-001<4>, APED-B11-2655-171

NO.	DATE	REVISION
1	12-08-94	DRAFTED FOR VESSEL INSPECTION PROGRAM

IES:

Inservice Inspection Program  
Reactor Pressure Vessel Sketch

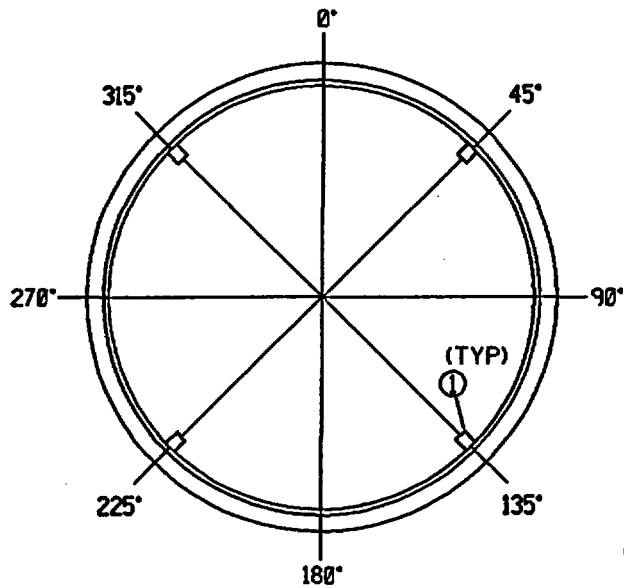
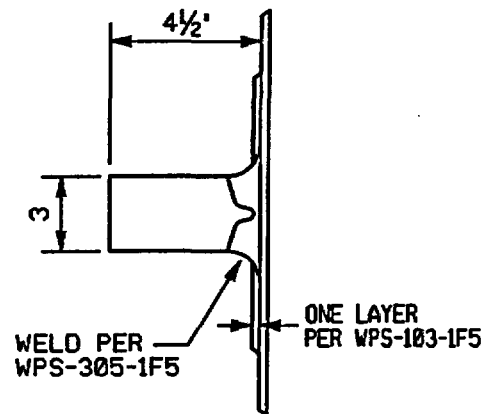
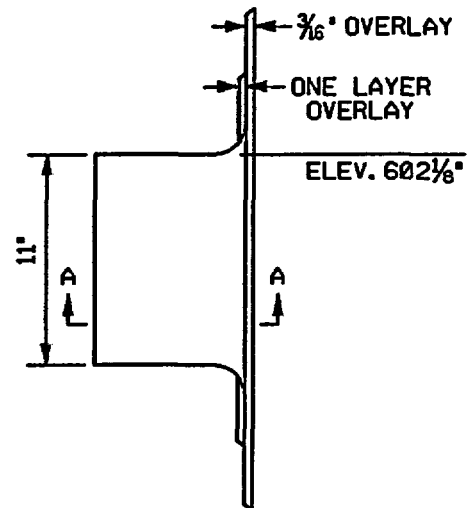
GUIDE ROD BRACKET

DWG. NO.

VS-01-28

REV.  
1

NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	STEAM DRYER SUPP. BRKT. 304L SA240		

PLAN VIEWSECTION A-AELEVATION

REFERENCE DRAWINGS:  
APED-B11-001<4>, APED-B11-2655-170

NO.	DATE	REVISION
1	12-08-94	DRAFTED FOR VESSEL INSPECTION PROGRAM

**IES:**

Inservice Inspection Program  
Reactor Pressure Vessel Sketch

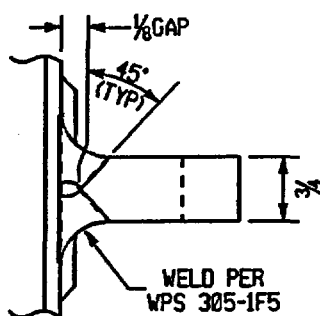
STEAM DRYER  
SUPPORT BRACKET

DWG. NO.

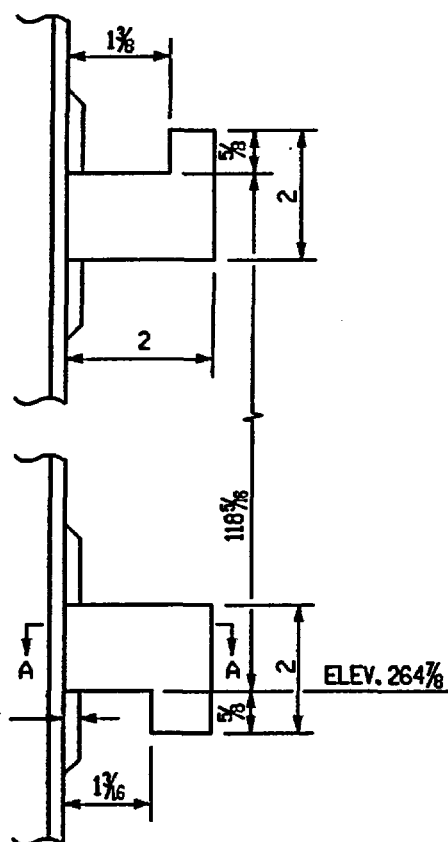
VS-01-29

REV.  
1





**SECTION A-A**



### ELEVATION

**REFERENCE DRAWINGS:**

**APED-B11-001<4>, APED-B11-059,  
APED-B11-067, APED-B11-2655-198**

**IES:**

## Inservice Inspection Program Reactor Pressure Vessel Sketch

**SURVEILLANCE  
SPECIMEN BRACKET**

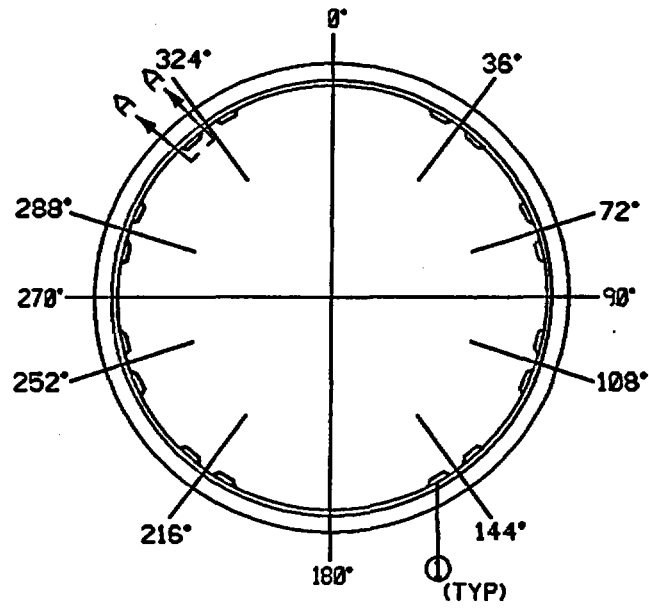
**DWG. NO.**

VS-01-31

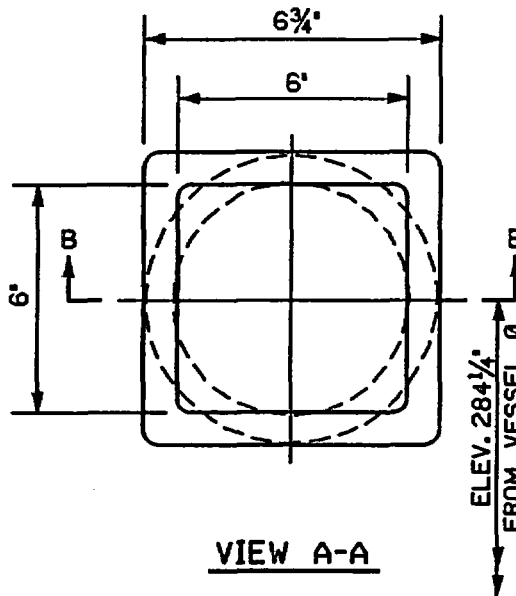
REV.  
1



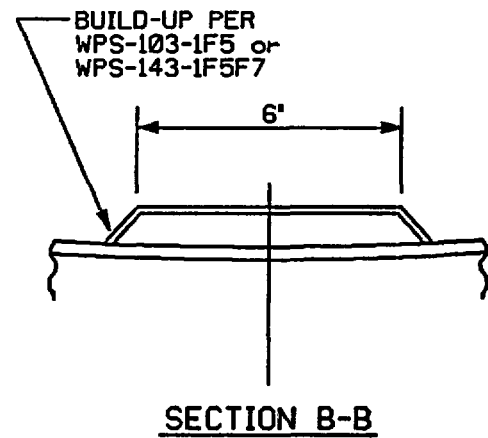
NO.	DESCRIPTION	BILL OF MATL.	PROCD.
1	SUPPORT PAD	309 or 308L	



PLAN VIEW



VIEW A-A



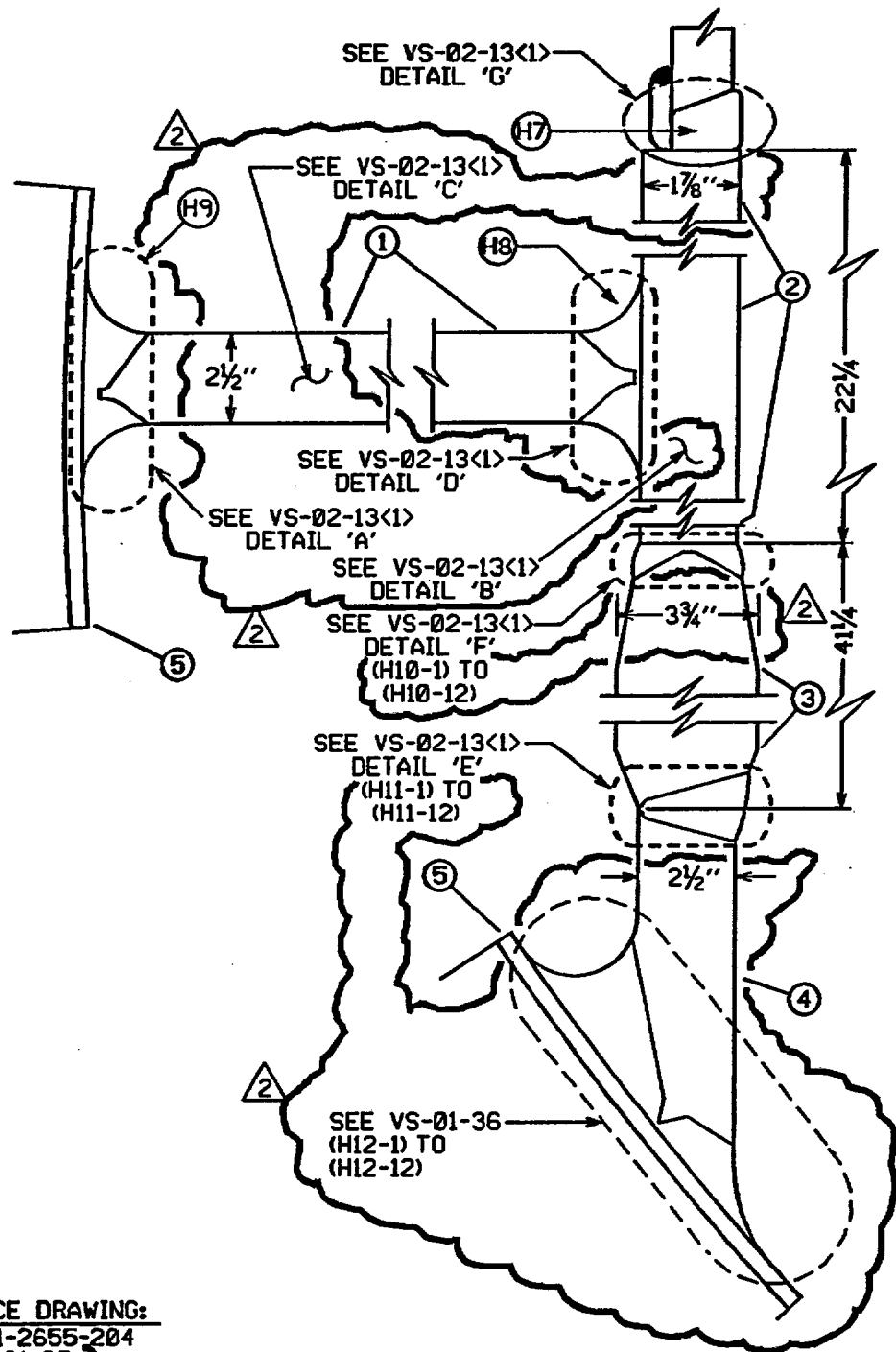
SECTION B-B

REFERENCE DRAWINGS:  
APED-B11-001<4>, APED-B11-2655-167

NO. DATE 12-08-94 REVISION	<b>IES:</b> Inservice Inspection Program Reactor Pressure Vessel Sketch	<b>JET PUMP RISER SUPPORT PAD</b> DWG. NO. VS-01-34	REV. 1
----------------------------------	---	--	-----------

NO.	DESCRIPTION	BILL OF MATL.	PROCD.
1	LEDOE SEGMENT PLATE	(SEE VS-02-11)	
2	CYLINDER PLATE	SB-160	
3	SUPPORT LEG	(SEE VS-02-12)	
4	SUPPORT STUB	(SEE VS-01-36)	
5	VESSEL	SA-533 CLASS 1 OR.B	

NO.	DATE	REVISION	DA	GD	SS	SS
1	8/8/95	REVISED PER DUF-0011				
2	11-23-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP	SS
			DET	CHKD	ENGR	VER



REFERENCE DRAWING:

APED-B11-2655-204

VS-01-07  
VS-01-36

2

**IES:**Inservice Inspection Program  
Reactor Pressure Vessel Sketch**SHROUD SUPPORT  
ASSEMBLY**

DWG. NO.

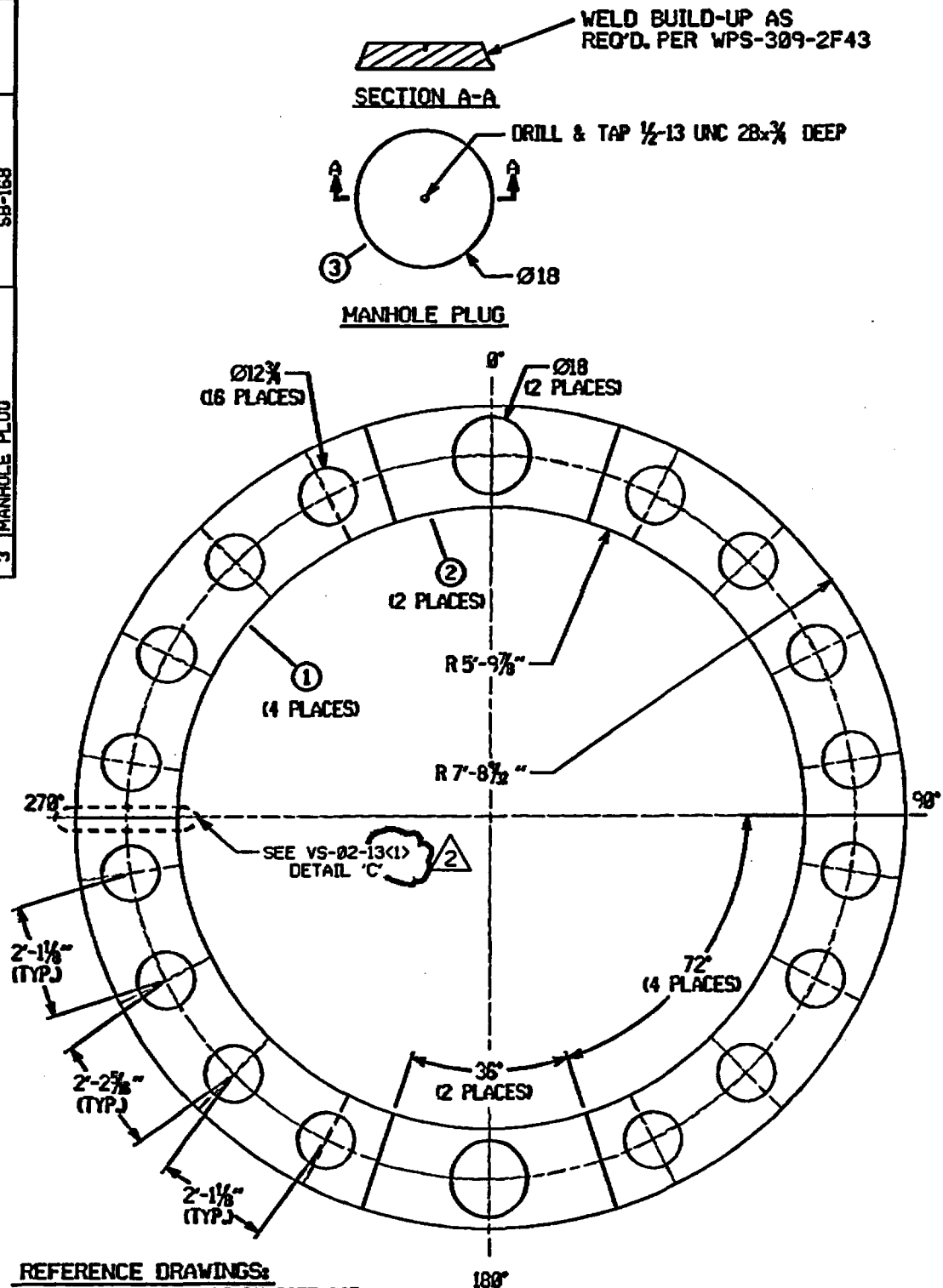
VS-02-10

REV.

2

NO.	DESCRIPTION	BILL OF MATL.	PROCD.
1	JET PUMP HOLE PLATE	SB-168	
2	MANHOLE SEGMENT PLATE	SB-168	
3	MANHOLE PLUG	SB-168	

NO.	DATE	REVISION	PROGRAM	MS	DF	GP	SS	SS	VER.
1	8/8/95	REVISED PER DUF-0011	REACTOR PRESSURE VESSEL SKETCH	DA	GD	SS	SS		
2	11-23-94	DRAFTED FOR VESSEL INSPECTION PROGRAM							

**IES:**

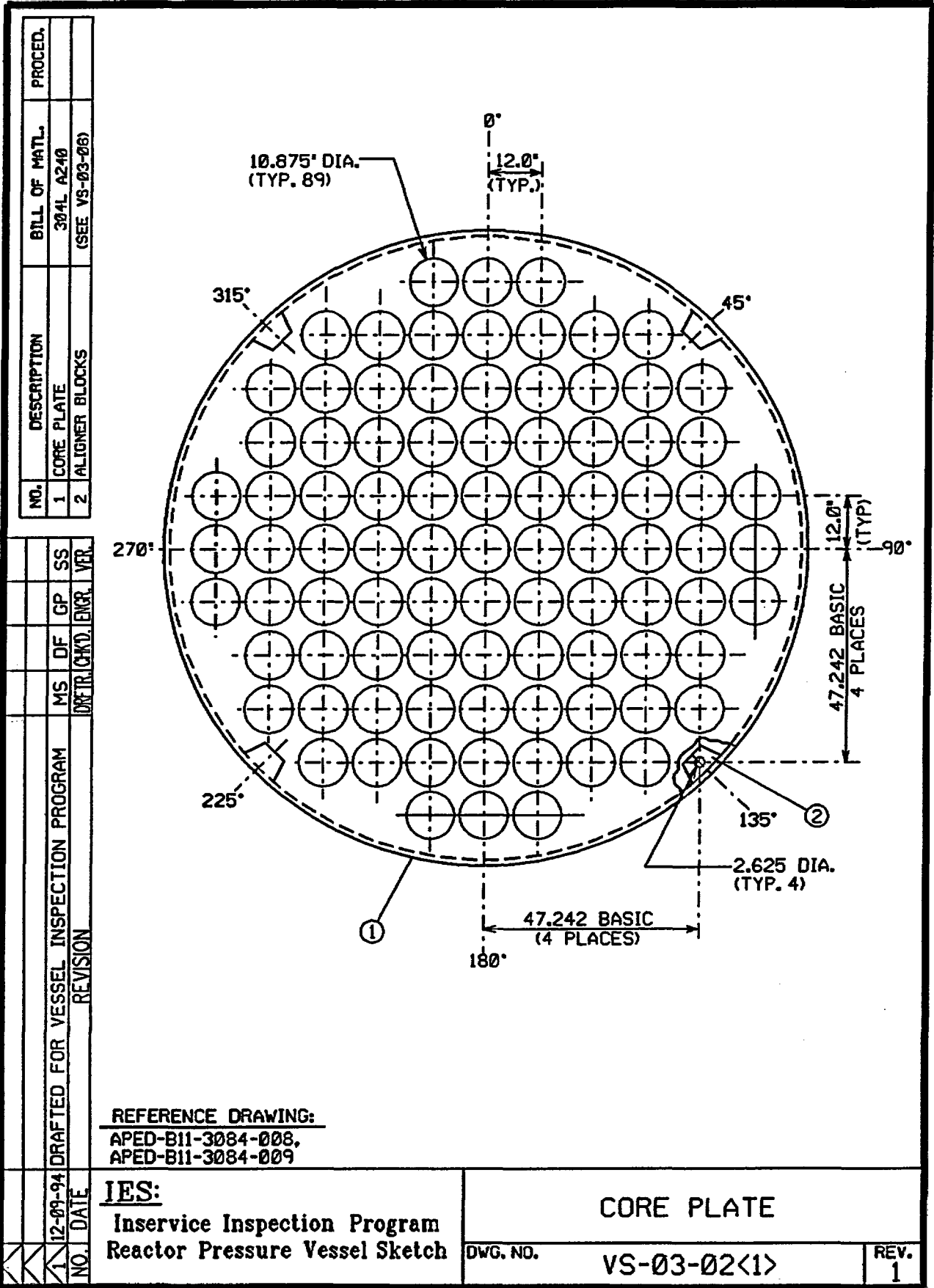
Inservice Inspection Program  
Reactor Pressure Vessel Sketch

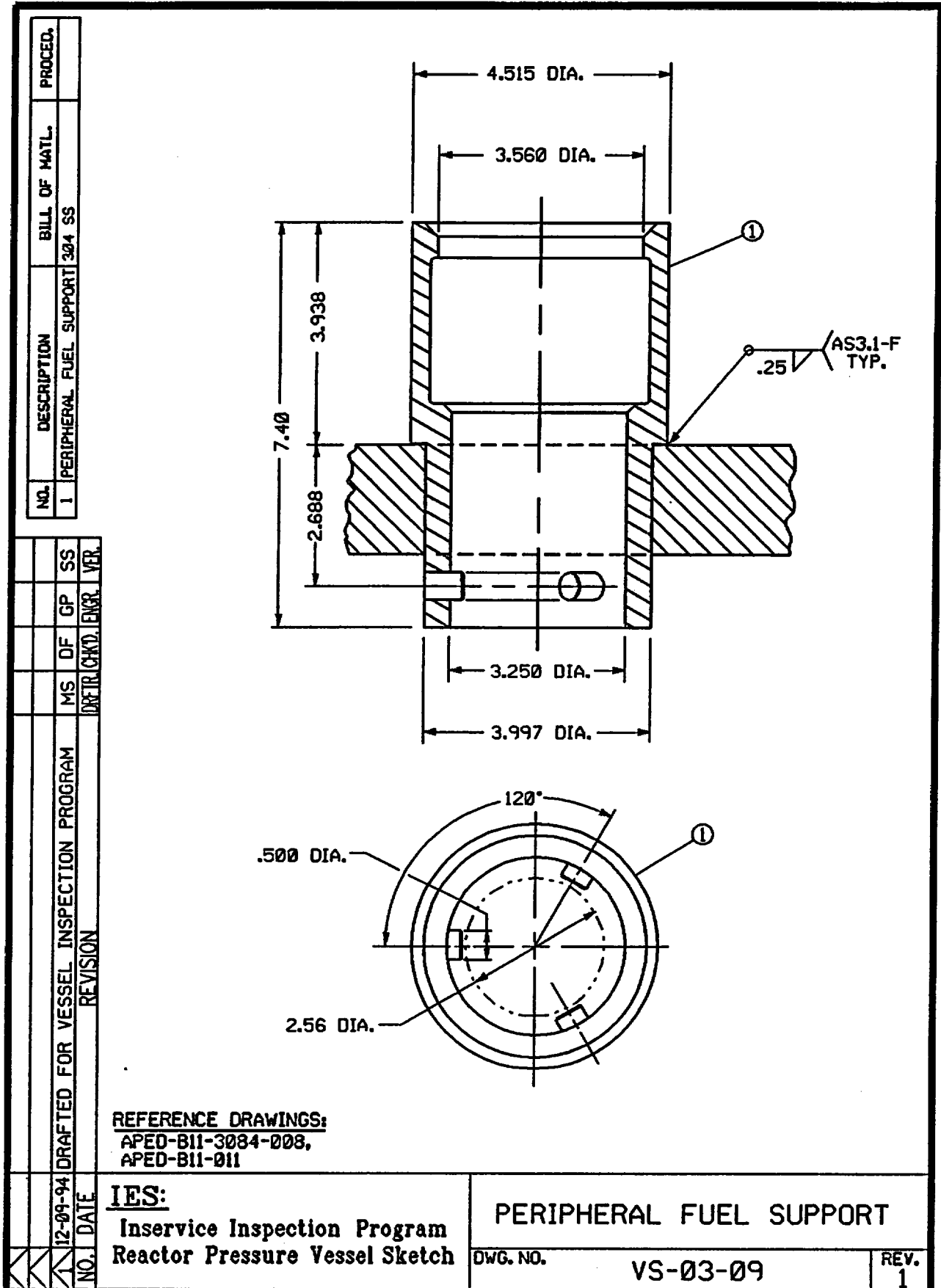
**LEDGE SEGMENT PLATES**

DWG. NO.

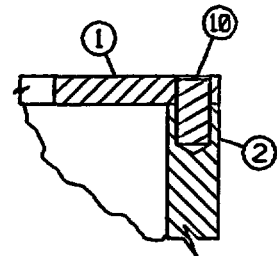
VS-02-11

REV.  
2

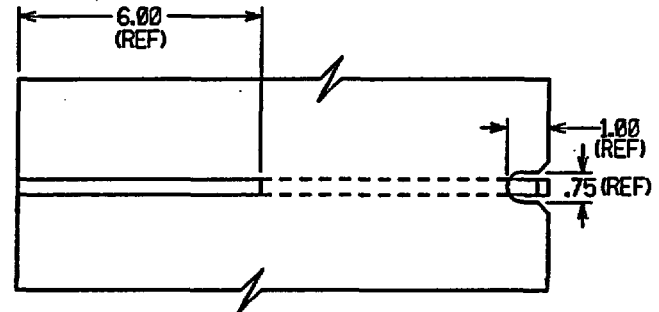




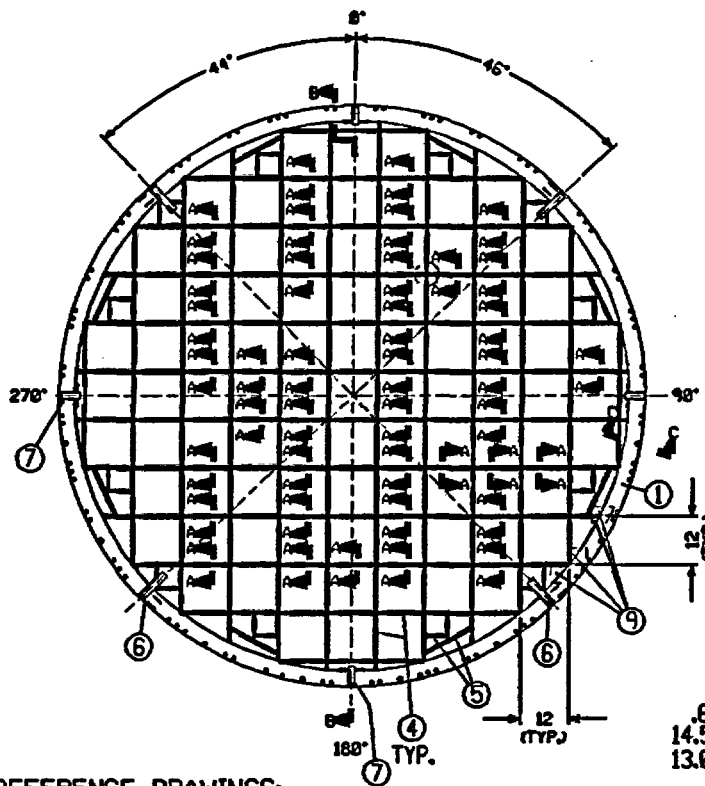
NO.	DESCRIPTION	BILL OF MATL.	PROCD.
1	TOP PLATE	(SEE VS-04-02)	
2	SIDE RING PLATE	(SEE VS-04-02)	
3	BOTTOM PLATE	(SEE VS-04-03)	
4	CROSS BEAMS	(SEE VS-04-04)	
5	SUPPORT PLATES	(SEE VS-04-05)	
6	LATCH	(SEE VS-04-06)	
7	EYEBOLT	(SEE VS-04-07)	
8	EYEBOLT BLOCK	(SEE VS-04-08)	
9	PIN BARS	(SEE VS-04-09)	
10	PIN (0.875" DIA.)	304 A276	



SECTION C-C

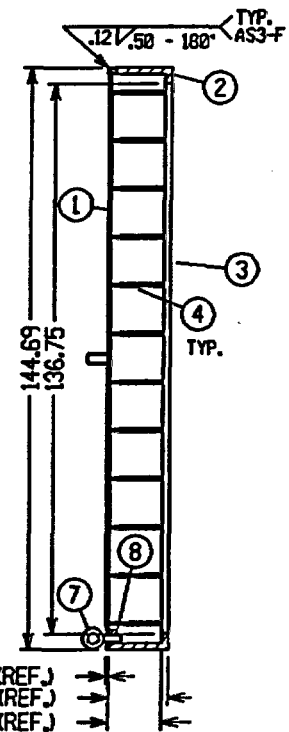


SECTION A-A



## REFERENCE DRAWINGS:

APED-B11-3084-001,  
APED-B11-3084-108



SECTION B-B

NO.	DATE	REVISION	MS	DF	GP	SS
1	12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM				
		DR. (CHKD. ENGR. VER.				

## IES:

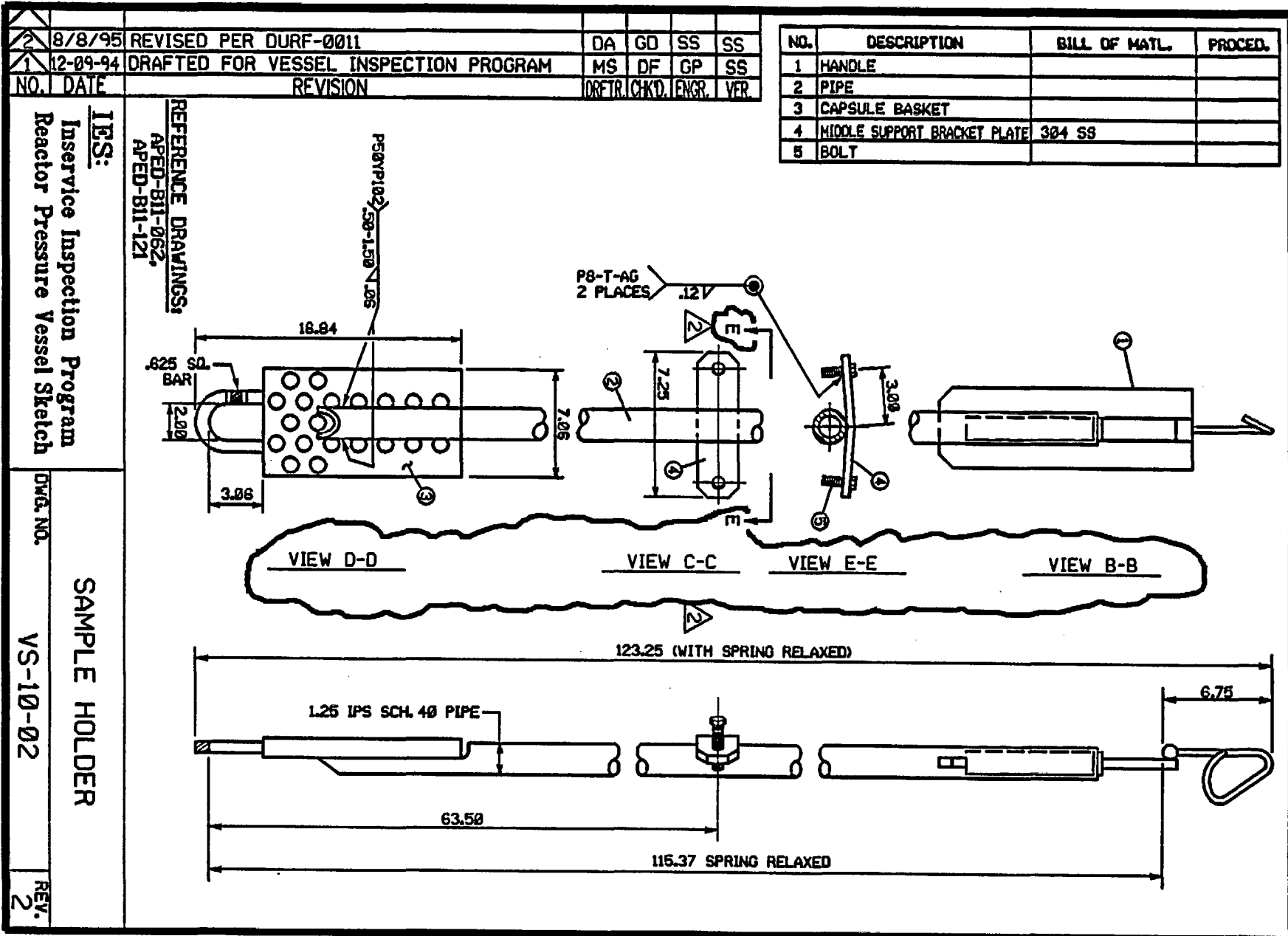
Inservice Inspection Program  
Reactor Pressure Vessel Sketch

TOP  
GUIDE

DWG. NO.

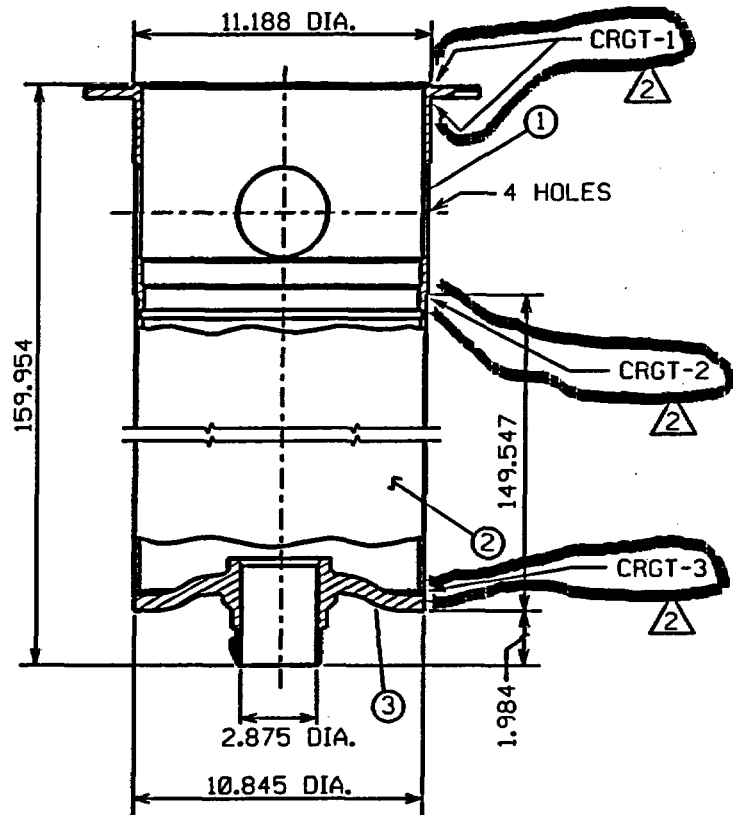
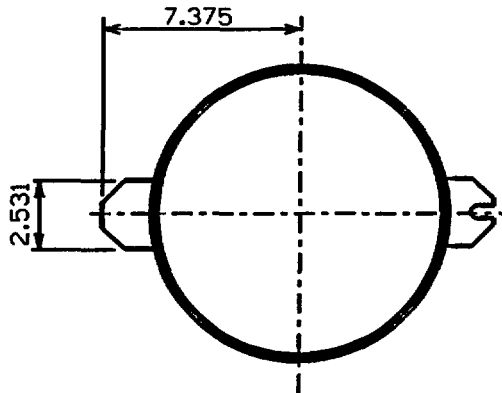
VS-04-01

REV.  
1



NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	SLEEVE	304 S.S.	
2	BODY	304 S.S.	
3	BASE	304 S.S.	

NO.	DATE	REVISION	DRFTR	CHKD.	ENGR.	VER.
2	4-5-99	REVISED PER DURE-U0104	JAH	TAK	GP	FED
1	12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP	SS



REFERENCE DRAWINGS:  
APED-B11-122, APED-B11-127

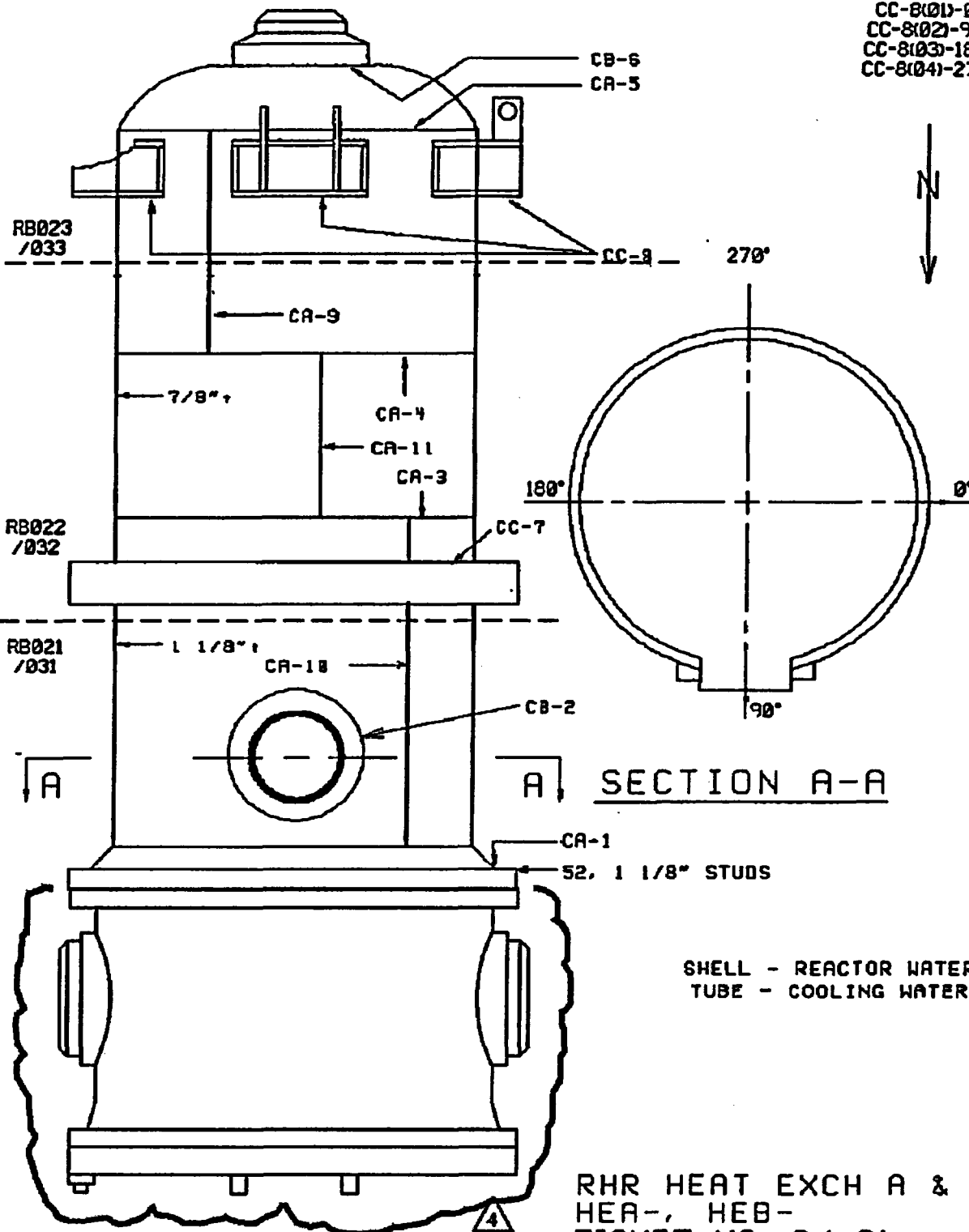
**IES:**  
Inservice Inspection Program  
Reactor Pressure Vessel Sketch

CRD GUIDE TUBE  
DWG. NO. VS-12-04

REV. 2



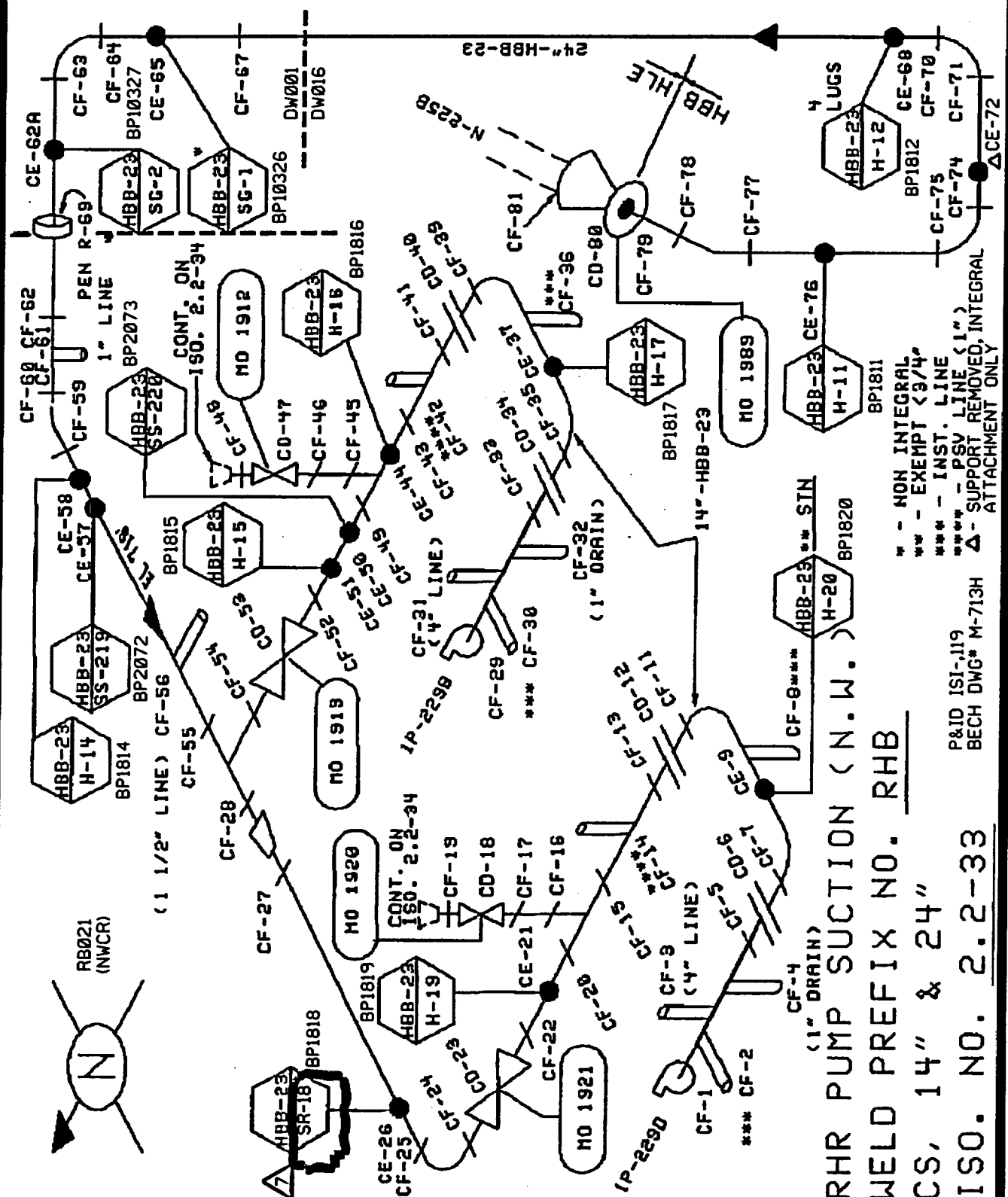
CC-8(01)-0°  
CC-8(02)-90°  
CC-8(03)-180°  
CC-8(04)-270°



# DRAWING RELEASE RECORD

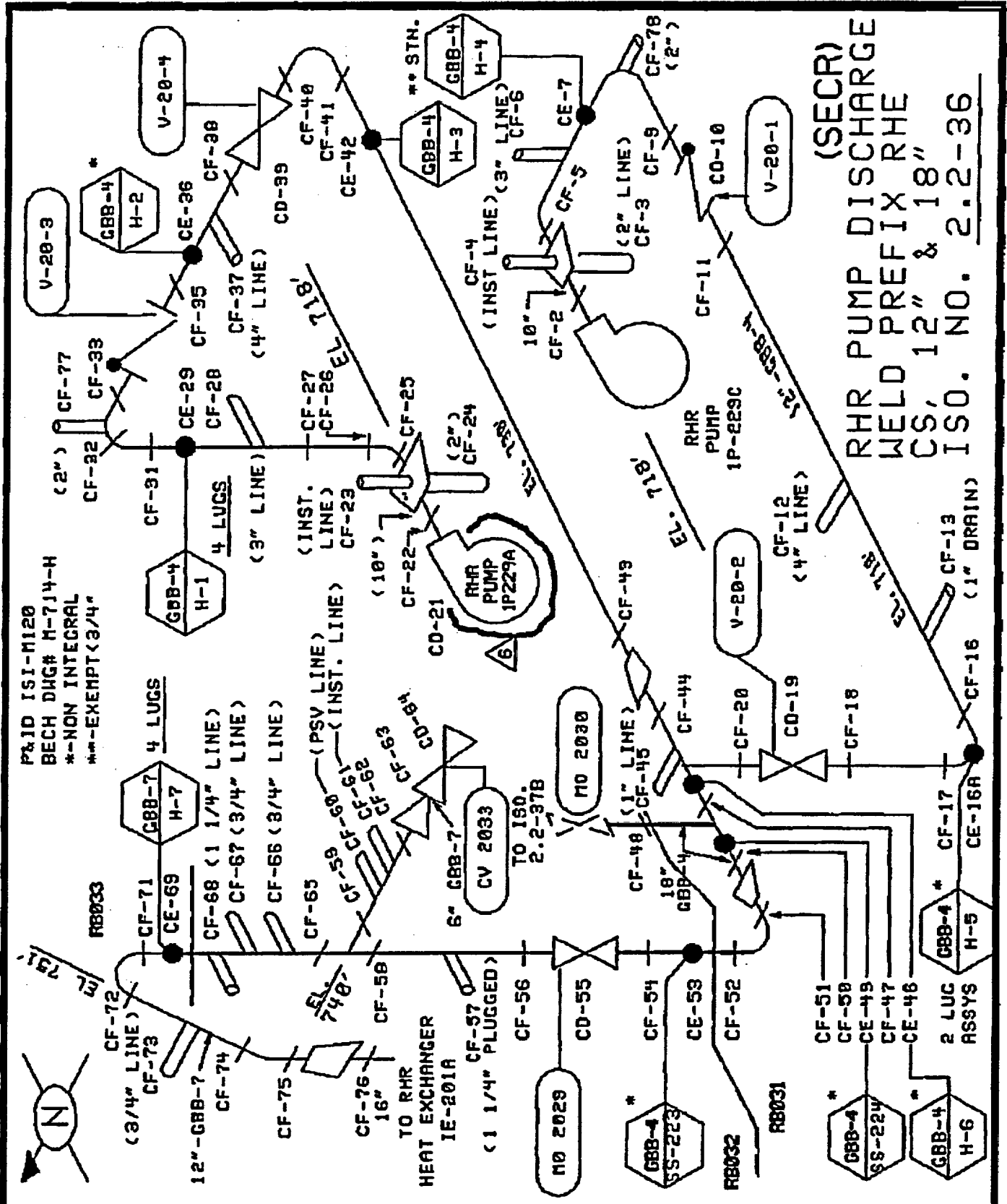
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	4-26-86	SHL	SHL	RCN	ISO'S FOR 2nd 10 YEAR PLAN
2	4-18-90	DA	FED	GP	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	8-23-94	DA	FED	GP	REVISED PER 1ST INSPECTION WALKDOWN
4	3/4/97	JAH	TAK /	GP	REVISED PER DUFF-0036





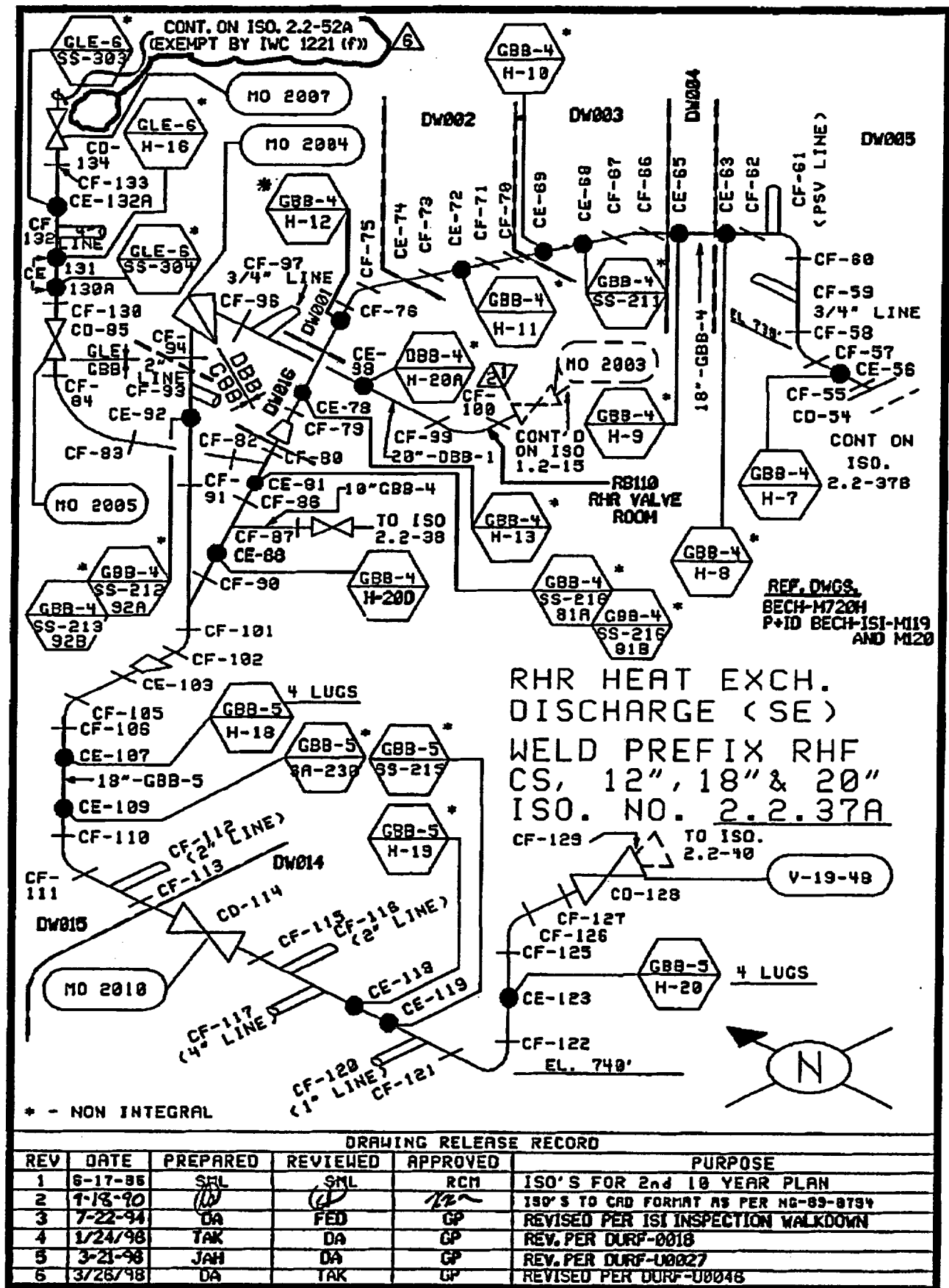
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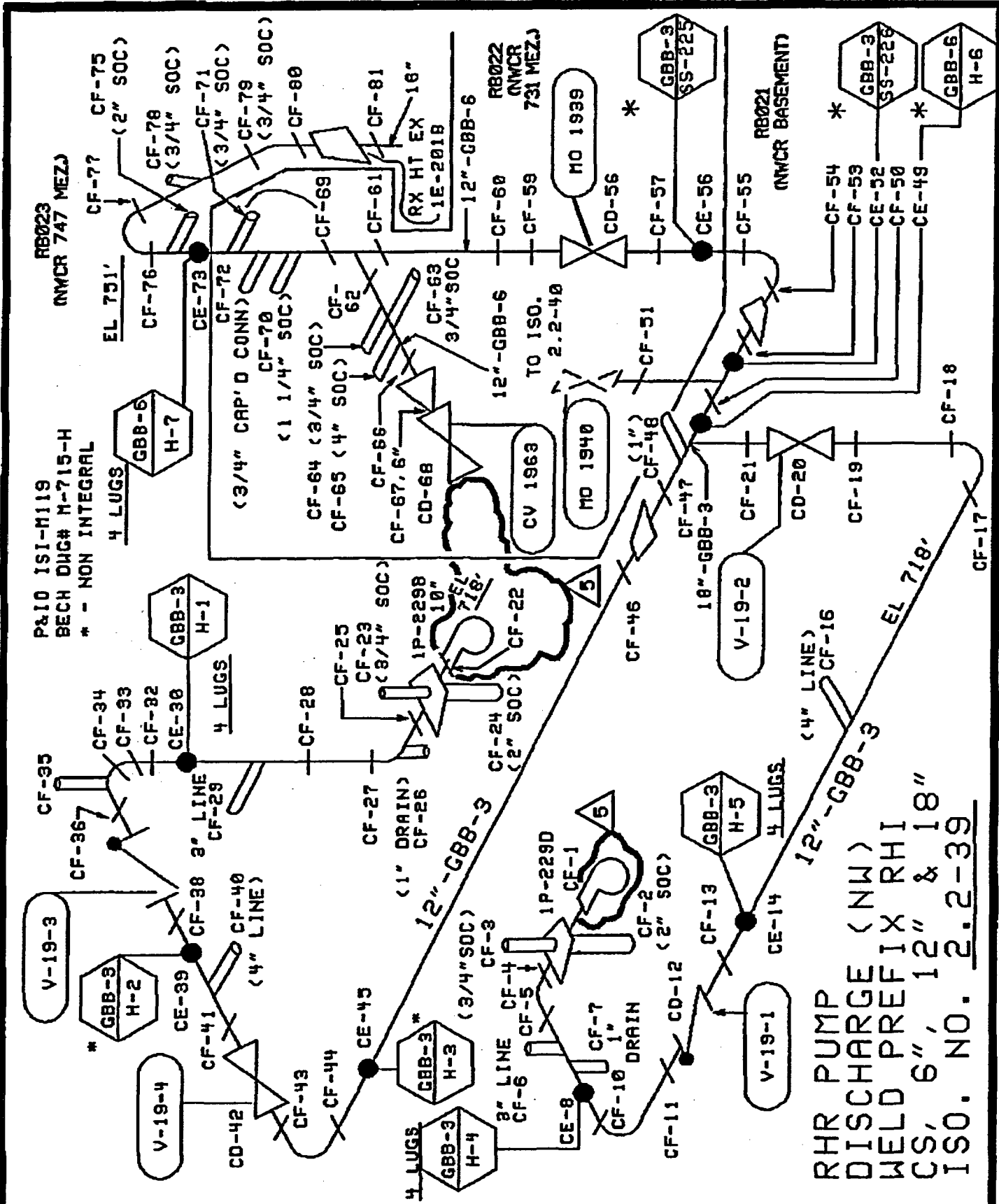
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	6/4/99	DA	GP	FED	REVISED PER DUF-U-0111
2	9-18-90	DA	GP	12/	ISO'S TO CAD FORMAT AS PER NC-89-0794
3	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
4	7-6-95	DA	JDF	GP	REVISED PER DUF-0013
5	2-2-96	TAK	JW	GP	REV. PER DUF-0018
6	3-21-96	JAH	DA	GP	REV. PER DUF-U-0027



**DRAWING RELEASE RECORD**

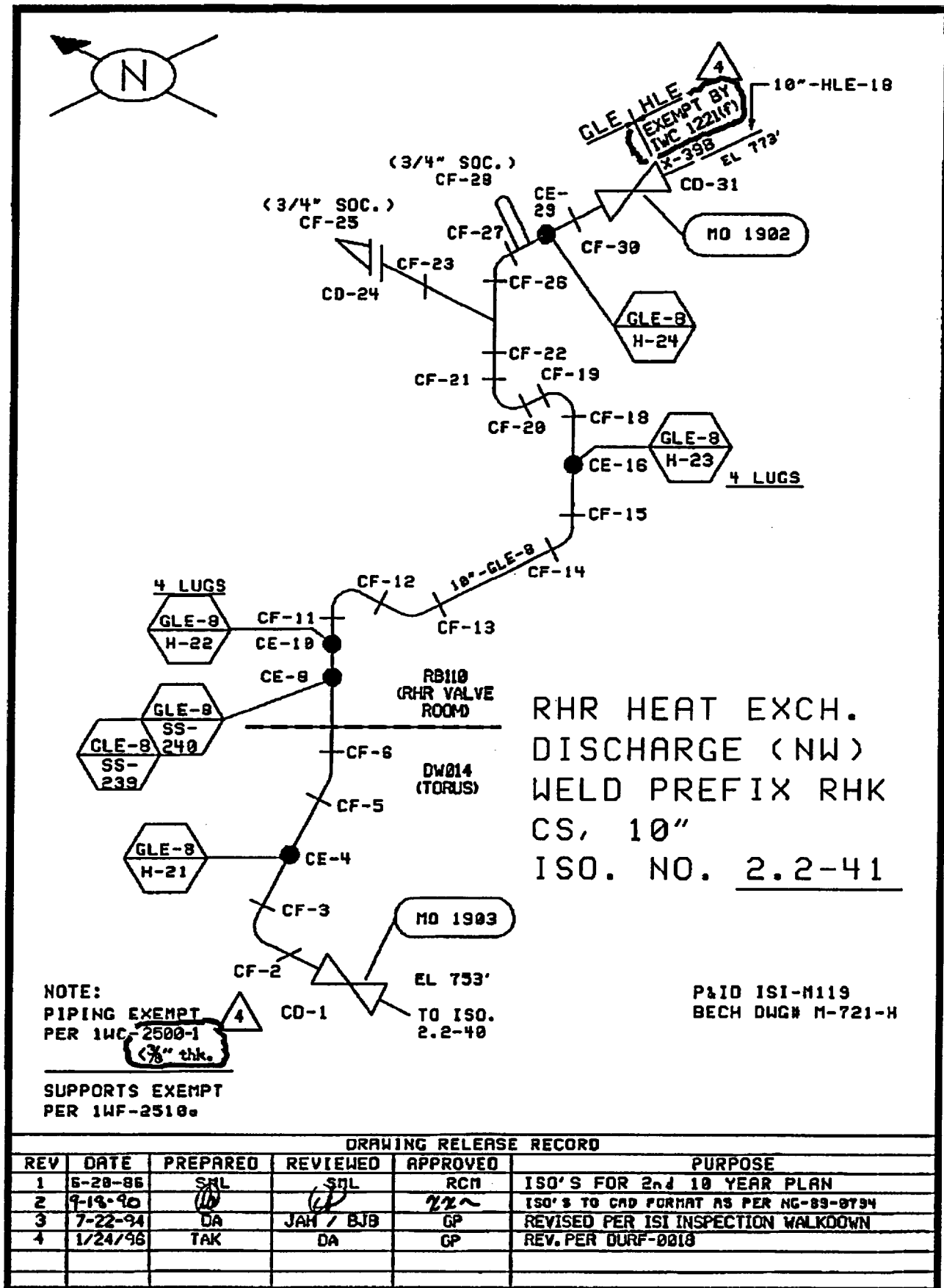
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	5-2-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DA	GP	KKM	160'S TO CAD FORMAT AS PER NG-89-0784
3	5-13-91	DA	<del>GP</del>	<del>RCM</del>	PCM B ADDED WELD CF-48, OMITTED ON REV.2
4	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JDF	GP	REVISED PER DUF-0013
6	1/19/96	TAK	JW	GP	REV. PER DUF-0018





# DRAWING RELEASE RECORD

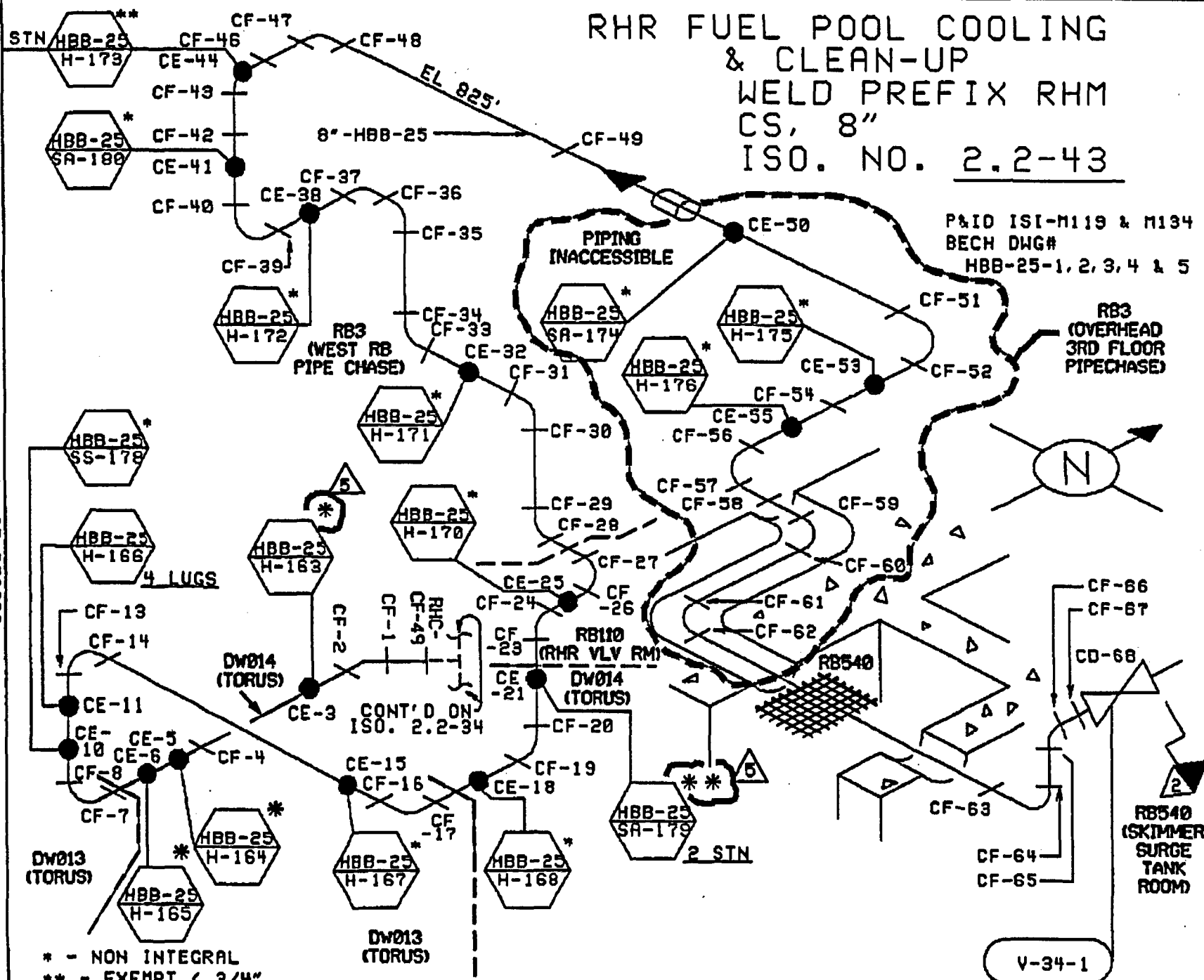
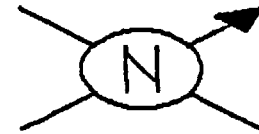
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	6-18-86	SHL	SHL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DA	GP	KKH	ISO'S TO CAD FORMAT AS PER NG-89-0794
3	10-3-91	DA	GP	KKH	REVISION PER DDC 798
4	7-22-94	DA	BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JDF	GP	REVISED PER DUF-0013



# RHR FUEL POOL COOLING & CLEAN-UP WELD PREFIX RHM CS, 8" ISO. NO. 2.2-43

P&ID ISI-M119 & M134  
BECH DWG#  
HBB-25-1, 2, 3, 4 & 5

RB3  
(OVERHEAD  
3RD FLOOR  
PIPECHASE)



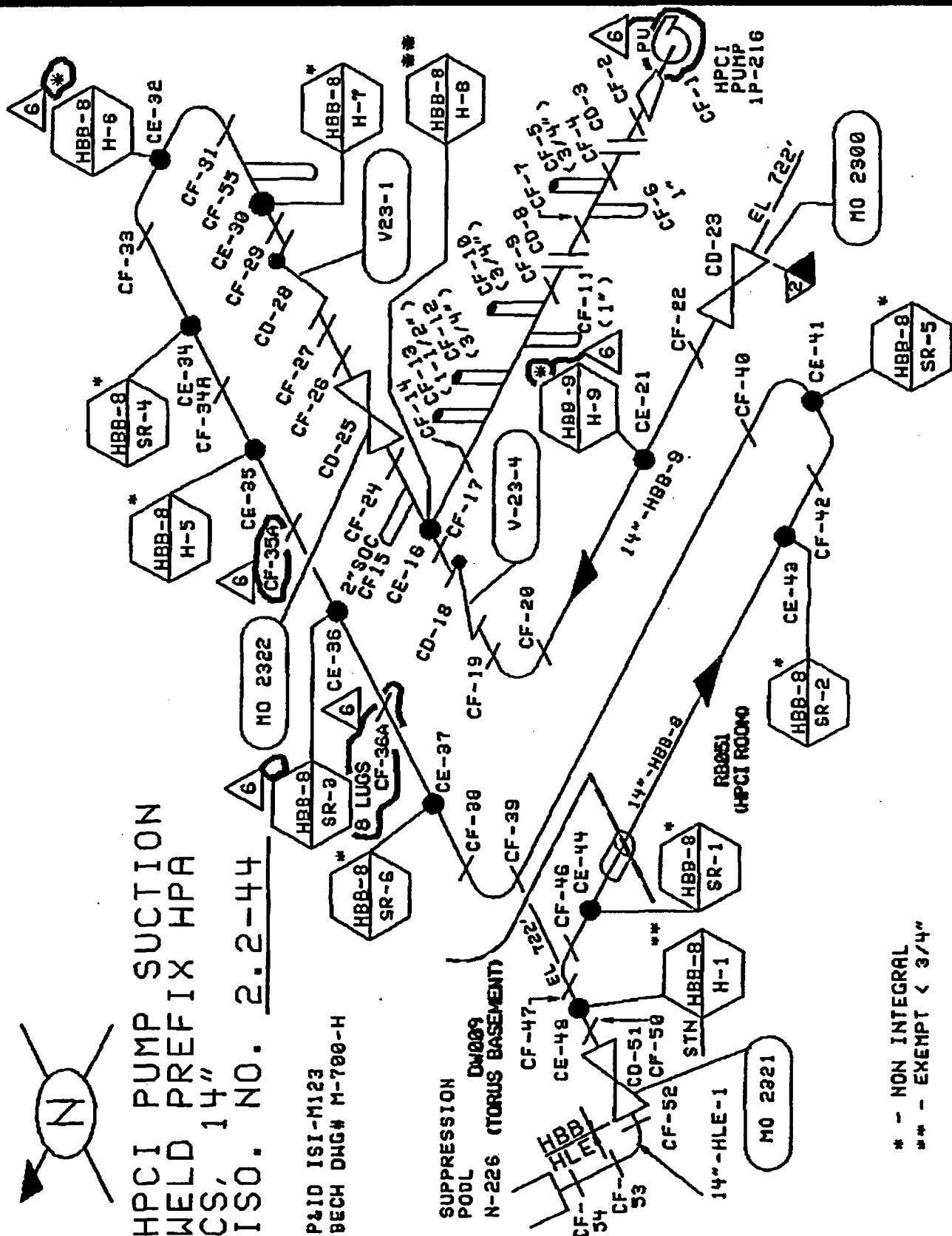
\* - NON INTEGRAL  
\*\* - EXEMPT < 3/4"

DRAWING RELEASE RECORD

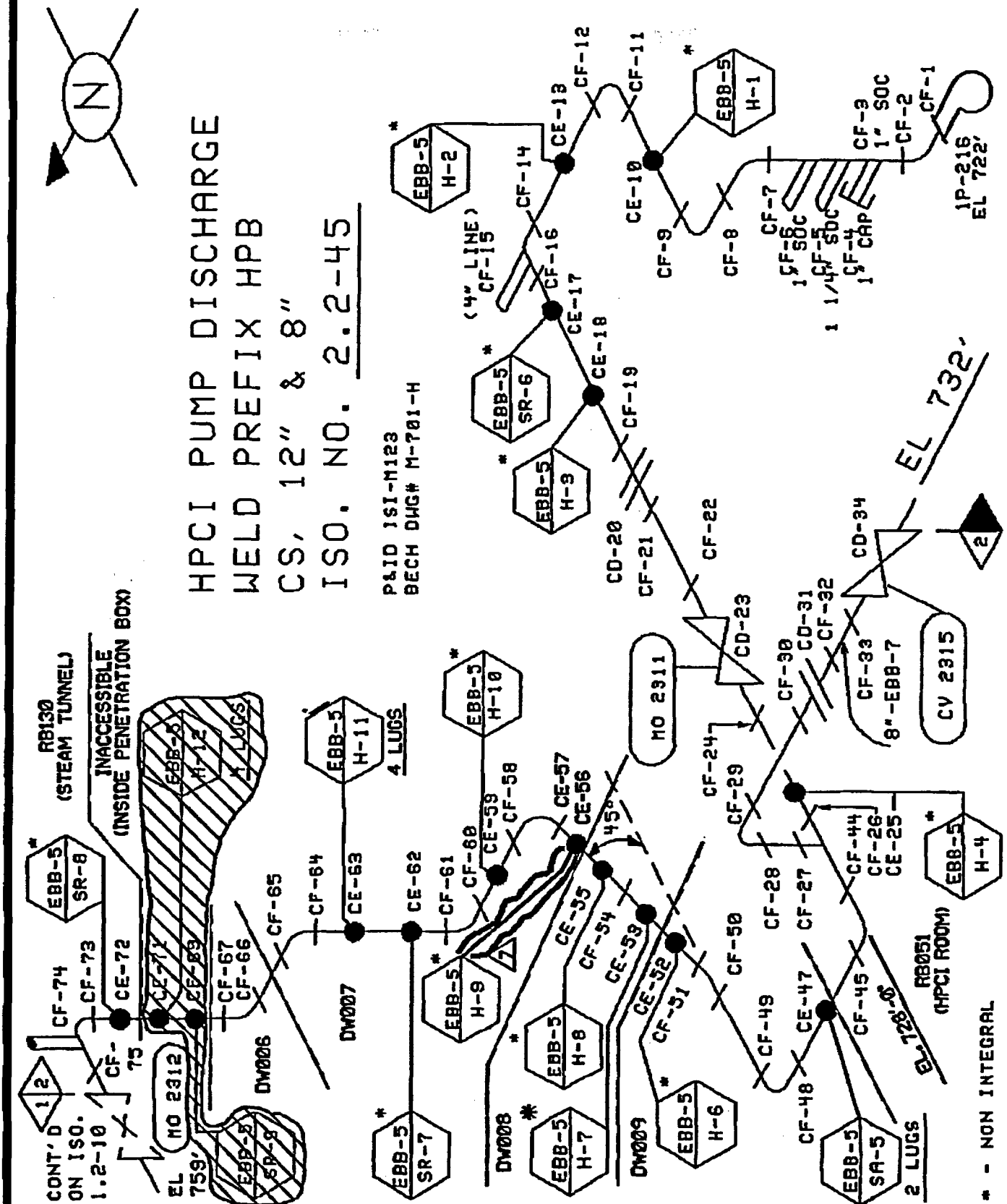
PURPOSE

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	6-23-86	SM	SM	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-8-90	DA	DA	GP	ISO'S TO CAD FORHRT AS PER NC-89-8794
3	7-22-94	DA	DA	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1/24/96	TAK	DA	GP	REV. PER DURE-0018
5	3-21-96	JAH	DA	GP	REV. PER DURE-U0027



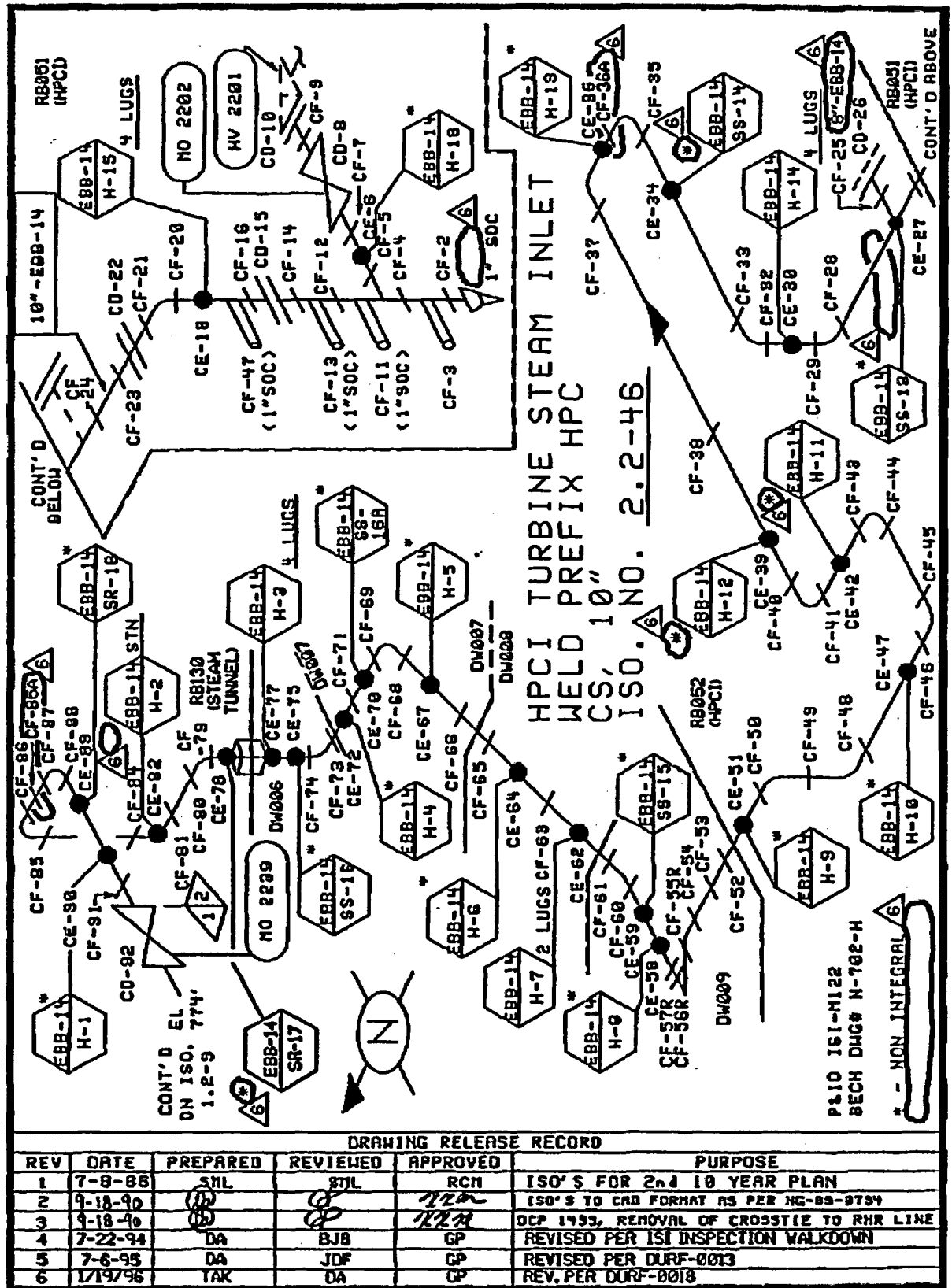


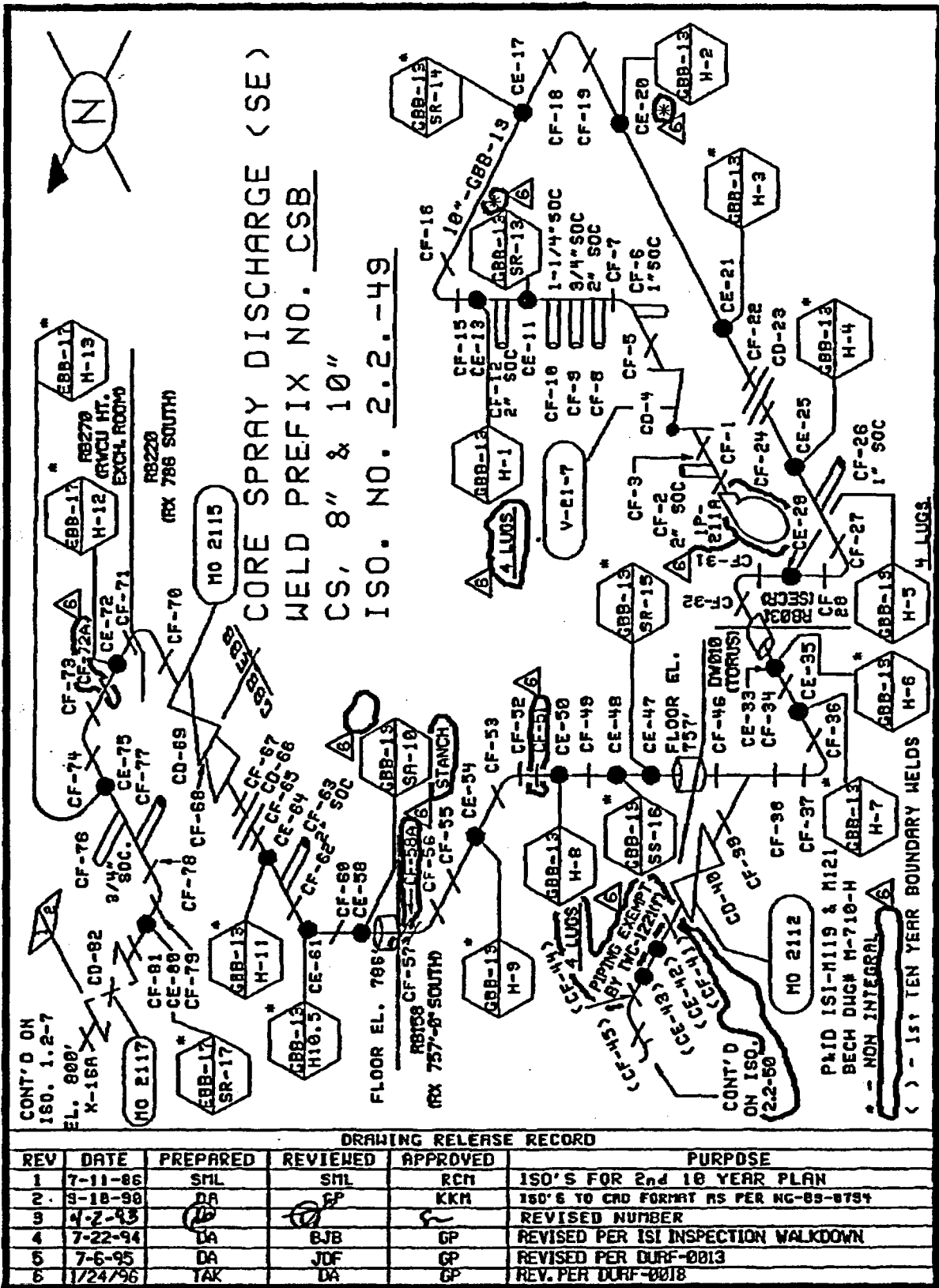
DRAWING RELEASE RECORD					
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-3-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DA	GP	KKM	ISO'S TO CAD FORMAT AS PER NC-89-0794
3	4-2-93	DA	GP	GP	REVISED NUMBER
4	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JDF	GP	REVISED PER DURF-0013
6	1/19/96	TAK	DA	GP	REV. PER DURF-0018

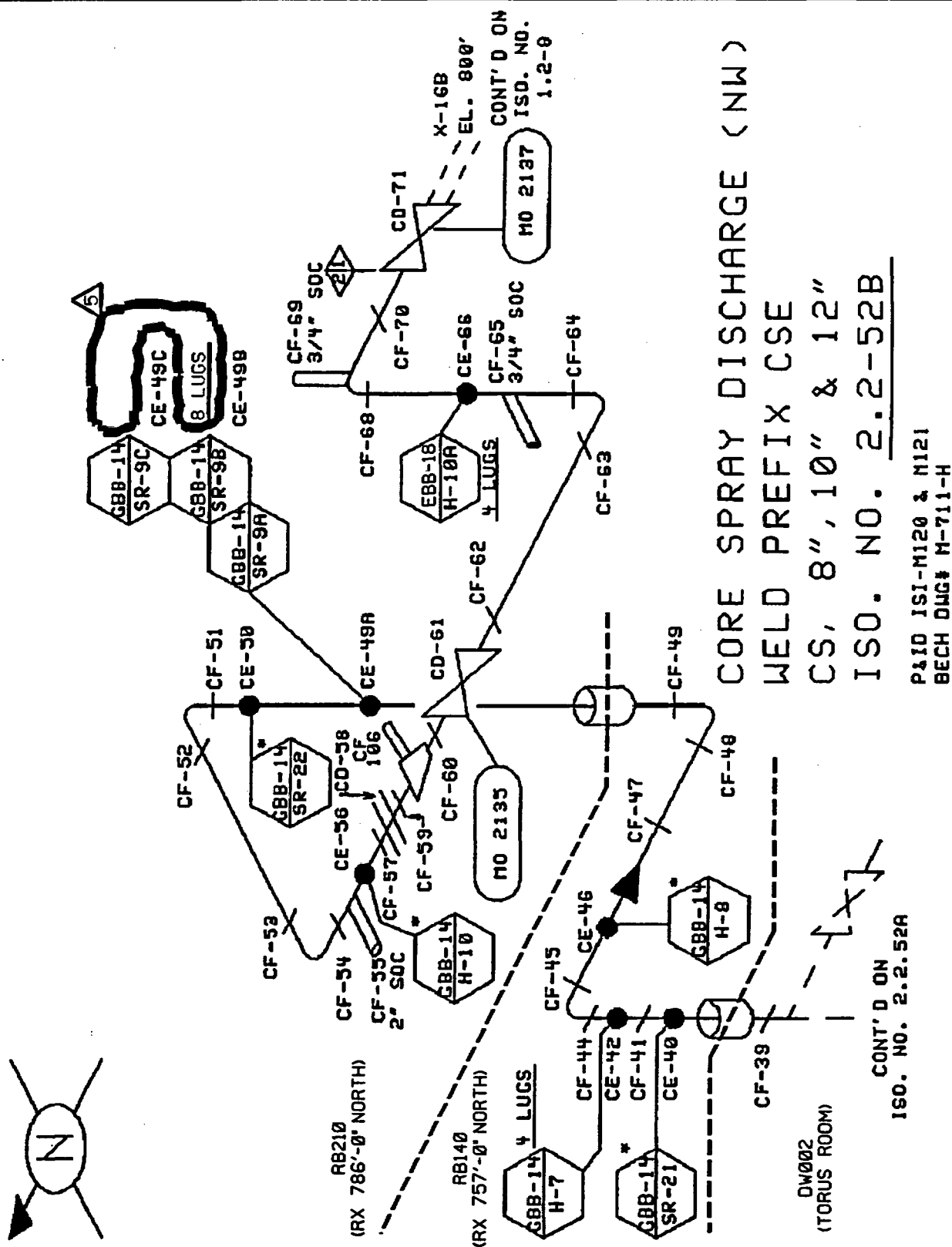


## DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	3-21-96	JAH	DA	GP	REV. PER DUF-0027
2	9-18-90	DA	GP	KKM	150' S TO CAD FORMAT AS PER NG-89-0784
3	10-3-91	DA	GP	KKM	CORRECTING HANGER IDENTIFICATION
4	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JDF	GP	REVISED PER DUF-0013
6	1/19/96	TAK	DA	GP	REV. PER DUF-0018



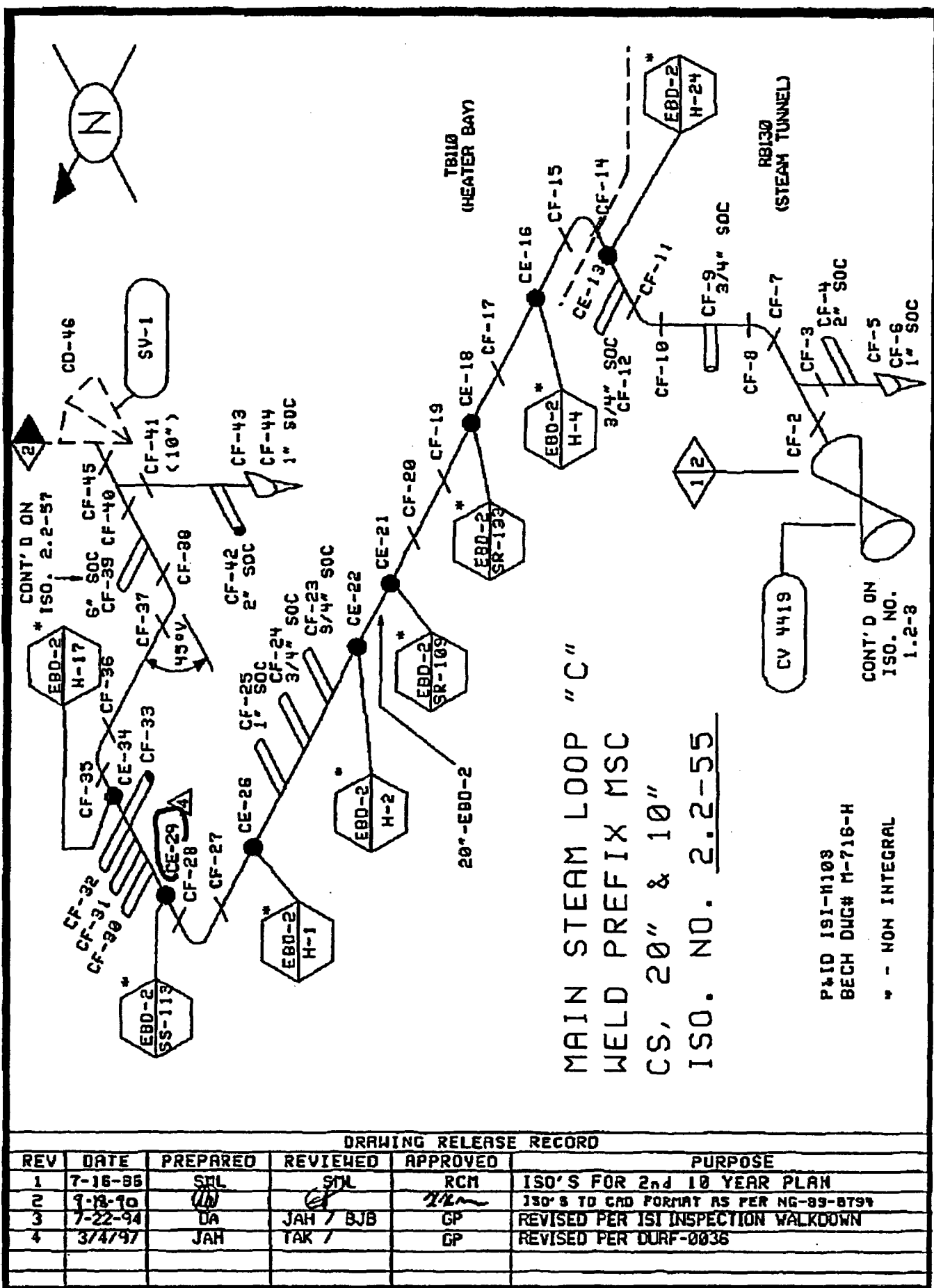




# DRAWING RELEASE RECORD

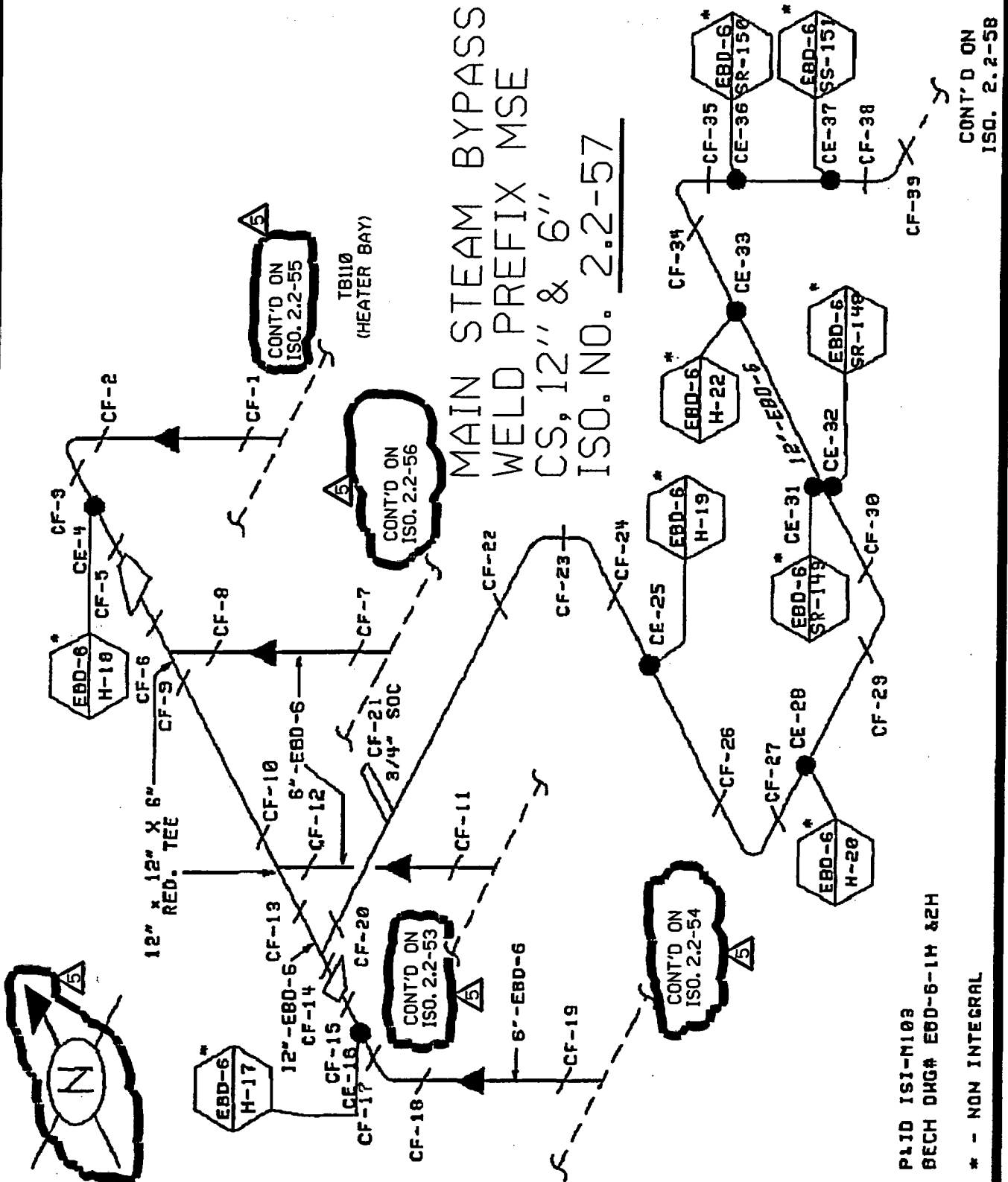
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-14-88	SM	SM	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	7-18-90	(b)	(b)	RCM	ISO'S TO CAD FORMAT AS PER NC-89-8794
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
4	7-6-95	DA	JDF	GP	REVISED PER DURF-0013
5	6/4/99	DA	GP	FED	REVISED PER DURF-U0111

DAEC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC



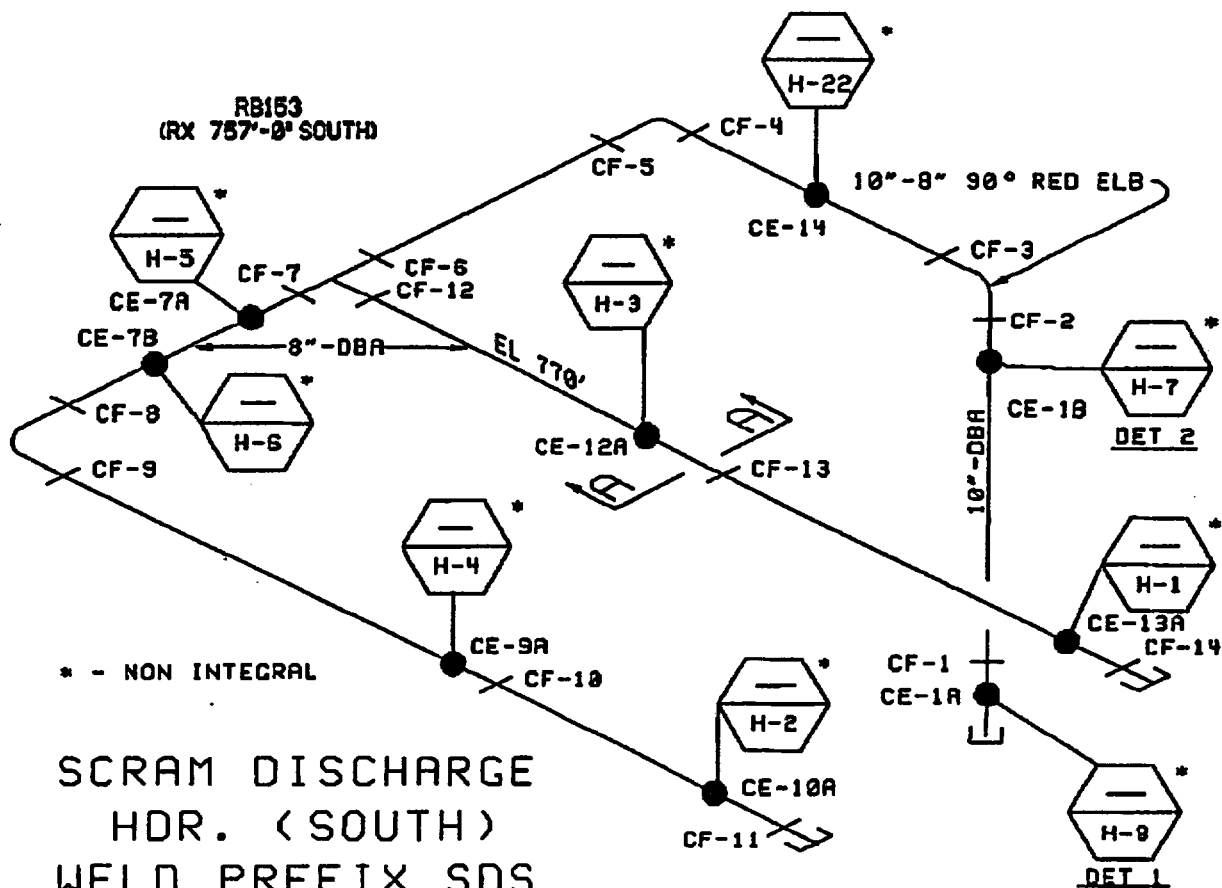
# DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-16-85	SHL	SHL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	7-18-90	DA	DA	RCM	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
4	3/4/97	JAH	TAK /	GP	REVISED PER DUF-0036

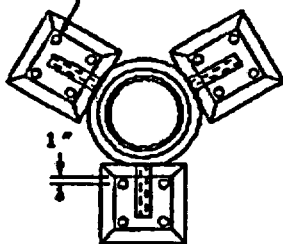


DRAWING RELEASE RECORD					
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-16-86	SM	SM	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	4-18-90	ab	ab	RCM	ISO'S TO CAD FORMAT AS PER NG-85-0784
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
4	7-6-95	DA	JDF	GP	REVISED PER DURF-0013
5	6/4/99	DA	GP	FED	REVISED PER DURF-U0111



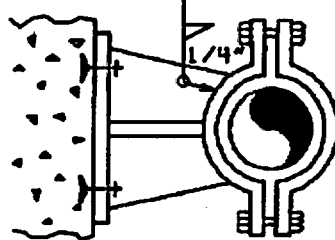


3/4" BOLTS  
TYP OF 4

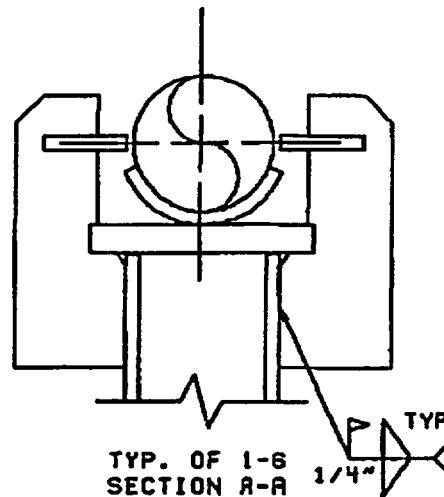


DETAIL 1

TYP.



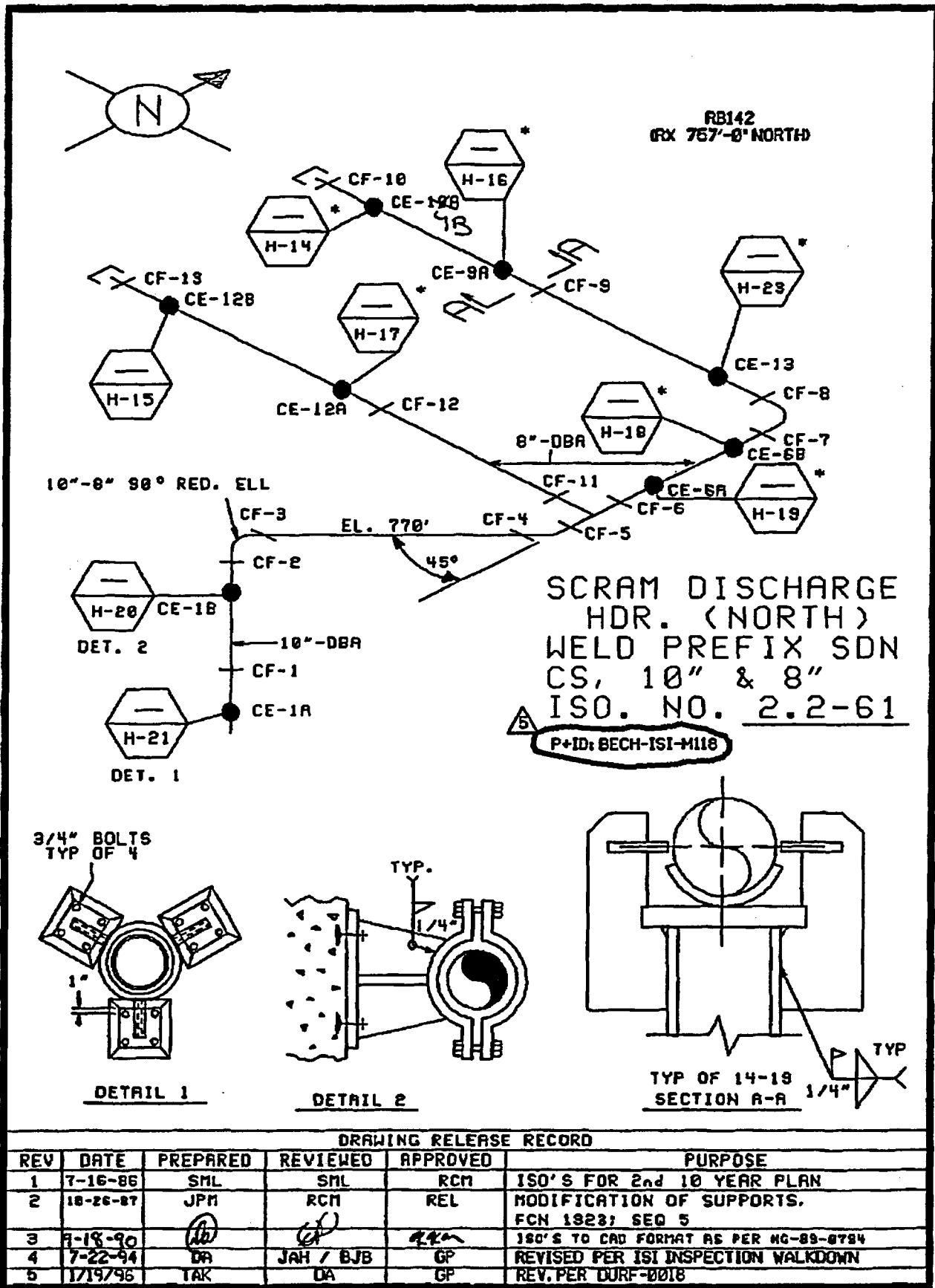
DETAIL 2

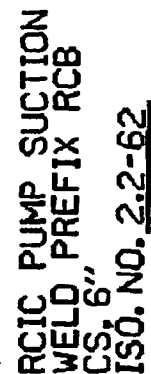


# DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-16-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	10-28-87	JPM	RCM	REL	MODIFICATION OF SUPPORTS, FCN 1323; SEQ 5
3	9-18-90	DA	DAH	GP	ISO'S TO CAD FORMAT AS PER NG-89-0794
4	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
5	1/19/98	TAK	DA	GP	REV. PER DURE-0018

DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC





**NOTE:** PIPING EXEMPT  
BY IWC-2580-1  
< 3/8" THICK

**DETAIL-"I"**

DRAWING RELEASE RECORD					
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3/20/96	MS	JAH	GP	ISSUED PER DURF-0019

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part J, page 1 of 4

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**STATUS OF WORK FOR THIRD TEN YEAR INTERVAL**

(Those percentages shown are actual, where the percentages exceed the allowable only the maximum (50% for period one and at least 16% for period two) will be taken credit for).

CLASS 1					
ITEM NO.	TOTAL #	PERIOD 1	PERIOD 2	PERIOD 3	REMARKS
B1.11	4	0%	0%	0%	
B1.12	8	0%	0%	0%	
B1.21	2	25%	50%	50%	
B1.22	15	0%	0%	0%	
B1.30	1	50%	50%	50%	See Note 7
B1.40	1	33%	67%	67%	
B1.51	1	0%	0%	0%	
B3.90	33	48%	73%	73%	See Note 1,8
B3.100	33	48%	73%	73%	See Note 1,8
B4.11	2	0%	0%	0%	See Note 2
B4.12	89	0%	0%	0%	See Note 2
B4.13	30	0%	0%	0%	See Note 2
B5.10	14	50%	71%	71%	See Note 8 and 11
B5.20	8	38%	63%	63%	See Note 11
B5.130	8	38%	63%	63%	See Note 11
B5.140	2	0%	50%	50%	See Note 11
B6.10	60	33%	67%	100%	
B6.20	56	29%	64%	100%	
B6.30	4	100%	100%	100%	
B6.40	60	33%	67%	100%	
B6.50	60	33%	67%	100%	
B6.180	2	0%	0%	0%	See Note 3
B6.190	2	0%	0%	0%	See Note 3
B6.200	2	0%	0%	0%	See Note 3
B7.10	3	33%	67%	100%	
B7.50	5	20%	20%	20%	See Note 3
B7.60	2	0%	0%	0%	See Note 3
B7.70	47	4%	6%	8%	See Note 3
B7.80	89	15%	15%	15%	See Note 3
B9.11	94	22%	33%	33%	See Note 11
B9.12	0	0%	0%	0%	See Note 6 and 11
B9.21	9	22%	22%	22%	See Note 11
B9.31	6	17%	33%	33%	See Note 11
B9.32	1	0%	0%	0%	See Note 11
B9.40	23	22%	40%	40%	See Note 11

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part J, page 2 of 4

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**STATUS OF WORK FOR THIRD TEN YEAR INTERVAL**

**CLASS 1**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
B10.10	1	0%	0%	0%	See Note 4
B10.20	3	33%	67%	100%	See Note 4
B10.30	1	0%	0%	100%	See Note 4
B12.20	2	0%	0%	0%	
B12.50	45	6%	9%	11%	See Note 3
B13.10	35	37%	63%	77%	
B13.20	11	36%	36%	72%	
B13.30	27	4%	4%	44%	
B13.40	5	20%	20%	80%	
B14.10	3	0%	0%	0%	
B15.10	1	N/A	N/A	N/A	Once per refueling outage
B15.11	1	N/A	N/A	N/A	Once per interval

**CLASS 1 AND CLASS 2 Risk Informed**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
R-I	70	0%	33%	33%	See Note 11

**CLASS 2**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
C1.10	2	50%	50%	100%	
C1.20	1	0%	100%	100%	
C2.21	2	0%	50%	100%	
C2.22	2	0%	50%	100%	
C3.10	1	0%	0%	100%	See Note 4
C3.20	7	29%	57%	100%	See Note 4
C5.51	69	17%	36%	36%	See Note 11
C5.81	1	100%	100%	100%	See Note 11
C7.10	5	N/A	N/A	N/A	Once per period
C7.20	5	N/A	N/A	N/A	Once per interval

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part J, page 3 of 4

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**STATUS OF WORK FOR THIRD TEN YEAR INTERVAL**

**CLASS 1 AND 2 SUPPORTS**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
F1.10	42	33%	64%	100%	See Note 5
F1.20	52	27%	58%	100%	See Note 5
F1.40	20	40%	65%	85%	See Note 5

**STATUS OF WORK FOR (TWE) FIRST TEN YEAR INTERVAL**

**CLASS MC**

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
E1.11	3	33%	67%	0%	
E1.12	31	19%	67%	0%	
E1.20	8	38%	75%	0%	
E4.11	2	0%	40%	0%	See Note 9
E5.30	4	25%	75%	0%	
E8.10	14	29%	71%	0%	
E9.20	*	N/A	N/A	N/A	See Note 10

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT**  
March 31, 2003 through April 20, 2003

Part J, page 4 of 4

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required): N/A   | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**STATUS OF WORK FOR THIRD TEN YEAR INTERVAL**

- NOTE 1 - Item Numbers B3.90, B3.100**  
There are a total of 34 nozzles, however 1 of the nozzles is exempt by IWB-1220(c) and not included in the percentages.
- NOTE 2 - Item Numbers B4.11, B4.12, B4.13**  
These items are required to be examined during conduct of the system hydrostatic test, IES Utilities has implemented Code Case N-498-1 (TAP-P011)
- NOTE 3 - Item Numbers B6.180, B6.190, B6.200, B7.50, B7.60, B7.70, B7.80, B12.50**  
These examinations are performed when the component is disassembled for other reasons. Therefore IWX-2412-1 does not apply.
- NOTE 4 - Item Numbers B10.10, B10.20, B10.30, C3.10, C3.20**  
These item numbers are from Code Case N509 (TAP-I007)
- NOTE 5 - Item Number F1.10, F1.20, F1.40**  
These item numbers are from Code Case N491 (TAP-I008)
- NOTE 6 - Item Number B9.12**  
There are no welds counted for this item number because of the use of Code Case N-524 (NDE-R012)
- NOTE 7 - Item Number B1.30**  
50% of the shell-to-flange weld may be performed during the first and third inspection periods as allowed by Note 4 of Table IWB-2500-1.
- NOTE 8 - Item Numbers B3.90, B3.100, B5.10**  
Relief Request NDE-R035 allows alternative percentages (ref. Code Case N-598). 2 of the Nozzle-to-safeend welds (RRB-F002 and RRD-F002) have been repaired by applying a weld overlay. These two welds are now covered by the requirements of BWRVIP-75.
- NOTE 9 - Item Number E4.11**  
The DAEC has evaluated the need for augmented examination per this item number and has determined that the Torus should be examined twice per interval. Details are specified in Technical Approach and Position TAP-E002.
- NOTE 10 - Item Number E9.20**  
There are no components identified under this item number because the DAEC has been approved to use Option B of Appendix J. The "Performance Based Containment Testing Program" contains the requirements.
- NOTE 11 - Item Numbers B5.XX, B9.XX, C5.XX, and R-I**  
Risk-Informed methods are utilized as described in EPRI TR-112657B-A to determine scope of inspections for examination categories B-F, B-J, and C-F-2. The Risk-Informed scope has been combined into a new item number R-I for implementation in the second and third periods of the third interval.

**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

Part K, page 1 of 1

- |   |   |   |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,<br>an Alliant company<br>P.O. Box 351<br>Cedar Rapids, IA. 52406 | Central Iowa Power Cooperative<br>Marion, IA. | Corn Belt Power Cooperative<br>Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324   | 3) Plant Unit: #1                             |   |
| 4) Owners Certificate of Authorization (if required) : N/A  | 5) Commercial Service Date: 02/01/75          |   |
| 6) National Board Number of Unit: N/A   | Gross Generating Capacity: 614 MWE            |   |

**RELIEF REQUESTS**

The following are the relief requests and code cases that were used during the period of this Summary Report.

<b><u>RELIEF REQUESTS</u></b>	<b><u>DESCRIPTION</u></b>
NDE-R011	Use of Existing Calibration Blocks as an alternative
NDE-R012	Alternative Examination of Class 1 and 2 piping longitudinal seam welds
NDE-R014	Exemption from Appendix III calibration block notch dimensions
NDE-R015 Rev. 1	Use of the 1992 Addenda of ASME Section XI to govern repairs/replacements
NDE-R018	Alternative Rules for the selection and examination of Class 1, 2, and 3 integrally welded attachments
NDE-R020	Use of the DAEC Technical Specification requirements for visual examination and functional testing of snubbers
NDE-R027	Limited Exam of Closure Head Threads in Vessel Flange.
NDE-R035	Alternative Requirements to Required Percentages of Examinations
NDE-R038	Alternative Requirements to VII-4240 "Annual Training"
NDE-R041	Use of the 1992 Edition of ASME Section XI for "Additional Examinations"
PR-002	Alternative Testing for Class2 Pressure Retaining Containment Penetrations connected to nonsafety related piping systems
MC-R001	Qualification of Nondestructive Examination Personnel
MC-R002	Alternative to VT-3 for Seals and Gaskets
MC-R003	Alternative to Torque Test of Bolting
MC-R004	Preservice Examination of Reapplied Paint or Coatings
MC-R005	Visual Examination of Painted or Coated Containment Components Prior to Removal of Paint or Coatings
MC-R006	Successive examinations of Repaired Areas
<b><u>CODE CASE #</u></b>	<b><u>DESCRIPTION</u></b>
N-198-1 (NDE-R023)	Inaccessible welds located in Containment Penetrations
N-416-1 (PR-004)	Alternative pressure testing requirements for welded repairs or installation or replacement items by welding, Class 1, 2, and 3.
N-491 (TAP-I008)	Alternative rules for examination of Class 1, 2, 3 and MC component supports
N-508-1 (NDE-R033)	Rotation of Serviced Snubbers and Pressure Relief Valves for the Purpose of Testing
N-509 (TAP-I007)	Alternative rules for selection and examination of Class 1, 2, 3 and integrally welded attachments
N-516-1 (NDE-R042)	Underwater Welding
N-546 (PR-008)	Alternative requirements for Qualification of VT-2 Examination Personnel
N-598 (NDE-R035)	Alternative Requirements to Required Percentages of Examinations
N-606 (MC-R007)	Extent and Frequency of VT-3 for Items E1.12 and E1.20



**THIRD TEN YEAR INTERVAL  
INSERVICE INSPECTION REPORT  
March 31, 2003 through April 20, 2003**

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**Attachment 3 to NG-03-0509  
Augmented Inspection Results RFO 18  
(3 Pages)**

**AUGMENTED INSPECTION RESULTS**  
**RFO18**

System Description	Weld or Component Description	Report Number	Inspection Requirement	ISI Iso/ Fig Number	Acc	Examination
REACTOR WATER CLEANUP	CUB-J005	I03024	A	1.2-11B	Y	UT
	CUB-J008	I03025	A	1.2-11B	Y	UT
	CUB-J010	I03026	A	1.2-11B	Y	UT
	CUB-J011	I03027	A	1.2-11B	Y	UT
	CUB-J013	I03028	A	1.2-11B	Y	UT
	CUB-J014	I03029	A	1.2-11B	Y	UT
	CUB-J016	I03030	A	1.2-11B	Y	UT
	CUB-J017	I03031	A	1.2-11B	Y	UT
CONTROL ROD DRIVE	CRA-F002	I03008	C	1.2-12A	Y	UT
	CRA-F004	I03009	C	1.2-12A	Y	UT
	CRA-J003	I03015	C	1.2-12A	Y	UT
RCIC	RSB-J008	I03035	A	1.2-18	Y	UT
	RSB-J009	I03036	A	1.2-18	Y	UT
RECIRCULATION PUMP SUCTION	RCA-J005B	I03037	A	1.2-19A	Y	UT
	RCA-J018	I03038	A	1.2-19A	Y	UT
RECIRCULATION SYSTEM PUMP/VALVE BYPASS	RBB-J006	I03046	A	1.2-21A	Y	UT
	RBB-J007	I03047	A	1.2-21A	Y	UT
	RBB-J008	I03048	A	1.2-21A	Y	UT
	RBB-J012	I03049	A	1.2-21A	Y	UT
Recirculation Pump Suction	RCB-J021	I03051	A	1.2-21A	Y	UT
	RCB-J037	I03052	A	1.2-21A	Y	UT
Steam Dryer Assembly FEEDWATER	STEAM DRY EXT SURFACE	I03064	B	VS-7-1	Y	VT-3
	SPARGER 45° & 135°	I03064	F	VS-09-01	Y	EVT-1
JET PUMPS	JET PUMP #05	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #06	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #07	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #08	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #09	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #10	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #11	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #12	I03064	G	VS-11-01	Y	EVT-1

ACC- ACCEPTED , Y INDICATING ACCEPTED, N INDICATING REJECTED.

A- BWRVIP-75  
B- GE SILS  
C - NUREG 0619  
D- BWRVIP

E - BWRVIP-76 (GL 94-03)  
F - BWRVIP-18  
G - BWRVIP-41  
H - OWNER DEFINED

**AUGMENTED INSPECTION RESULTS**  
**RFO18**

System Description	Weld or Component Description	Report Number	Inspection Requirement	ISI Iso/ Fig Number	Acc	Examination
Core Spray	HEADERS	I03064	F	VS-05-01	Y	EVT-1
	DOWNCOMERS	I03064	F	VS-05-01	Y	EVT-1
JET PUMPS	JET PUMP #01 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #02 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #03 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #04 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #05 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #06 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #07 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #08 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #09 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #10 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #11 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #12 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #13 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #14 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #15 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
	JET PUMP #16 BEAM BOLT	I03064	G	VS-11-01	Y	EVT-1
CRD	CRD GUIDE TUBES	I03064	D	VS-13-02	Y	EVT-1

ACC- ACCEPTED , Y INDICATING ACCEPTED, N INDICATING REJECTED.

A- BWRVIP-75  
B- GE SILS  
C - NUREG 0619  
D- BWRVIP

E - BWRVIP-76 (GL 94-03)  
F - BWRVIP-18  
G - BWRVIP-41  
H - OWNER DEFINED

**AUGMENTED INSPECTION RESULTS**  
**RFO18**

<b>System Description</b>	<b>Weld or Component Description</b>	<b>Report Number</b>	<b>Inspection Requirement</b>	<b>ISI Iso/ Fig Number</b>	<b>Acc</b>	<b>Examination</b>
Core Spray	CSA-J003	I03017	A	1.2-07	Y	UT

ACC- ACCEPTED , Y INDICATING ACCEPTED, N INDICATING REJECTED.

A- BWRVIP-75  
B- GE SILS  
C - NUREG 0619  
D- BWRVIP

E - BWRVIP-76 (GL 94-03)  
F - BWRVIP-18  
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