

August 15, 2001
NG-01-0975

Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station 0-P1-17
Washington, DC 20555-0001

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License No: DPR-49
Inservice Inspection Report
File: A-107a, A-286a, B-31c, SpF-118

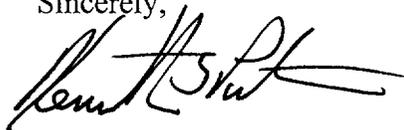
In accordance with the requirements of Paragraph IWA-6230 in Section XI of the ASME Boiler and Pressure Vessel Code and 10 CFR Section 50.55a(g), Nuclear Management Company, LLC (NMC) herewith submits the Refueling Outage (RFO) 17 Inservice Inspection Summary Report (Attachment 1). This report addresses examinations which were performed at the Duane Arnold Energy Center (DAEC) during the time period from December 1, 1999 through May 27, 2001.

Attachment 2 provides information regarding augmented inservice inspections performed during RFO 17. 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." Also included in Attachment 2 is information regarding inspections performed in accordance with BWRVIP-76 "BWR Core Shroud Inspection and Flaw Evaluation Guidelines."

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 your review upon request.

Should you have any questions regarding this matter, please contact this office.

Sincerely,



Kenneth S. Putnam
Manager Nuclear Licensing

A047

August 15, 2001

NG-01-0975

Page 2

Attachments: 1) ASME Section XI Summary Report
 Duane Arnold Energy Center Refueling Outage 17
 2) Augmented Inspection Results RFO 17

cc: G. Park

R. Anderson (NMC) (w/o Attachments 1 and 2)

G. Van Middlesworth (w/o Attachments 1 and 2)

B. Mozafari (NRC-NRR)

J. Dyer (Region III)

NRC Resident Office

ANII

Office of Labor Commission (State of Iowa) (w/o Attachment 2)

DOCU

Attachment 1
to NG-01-0975
ASME Section XI Summary Report
Duane Arnold Energy Center Refueling Outage 17

25 Years of



Rock Solid Performance

ASME Section XI Summary Report

Duane Arnold Energy Center

Refueling Outage 17

(Period 2)

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27, 2001

DUANE ARNOLD ENERGY CENTER

UNIT #1 PALO, IOWA

Commercial Service Date: February 1, 1975

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

December 1, 1999 through May 27, 2001

Dated: May 27, 2001

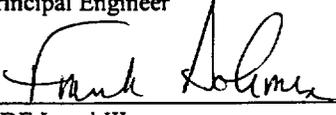
OWNER:

ALLIANT ENERGY

P.O. Box 351

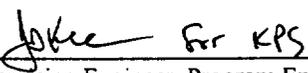
Cedar Rapids, Iowa 52406

Prepared by:  Date: 7/20/01
Principal Engineer

Reviewed by:  Date: 7/20/01
NDE Level III

Reviewed by:  Date: 7-23-01
Program Engineering Staff

Reviewed by:  Date: 7/24/01
Equipment Monitoring Group, Team Leader

Concurred by:  for KPS Date: 7/24/01
Supervising Engineer, Program Engineering

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
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**THIRD TEN YEAR INTERVAL
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Part A, Page 2 of 2

FORM NIS-1 (back)

8. Examination Dates 12/01/99 to 05/27/01 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 27 2001

Signed Gary Van Middlesworth By Gary Van Middlesworth Site Vice President

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 Hartford Boiler Co. of Hartford CT have inspected the components described in this Owner's Data Report during the period 12/01/99 to 05/27/01, 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 August 1 2001.

William O. Mulla
Inspector's Signature

Commissions NB 7542 N, I 10462
National Board, State, Province and No.

Note 1: As per letter NG-89-3390, the ASME Section XI "Vessels," RHR Heat Exchangers 1E-201A and 1E-201B and the Reactor Vessel are excluded from the Summary Report to the State.

Note 2: Other owners are Central Iowa Power Cooperative and Corn Belt Power Cooperative.

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part B, page 1 of 3

- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 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**
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Part B, page 2 of 3

- | | | |
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CERTIFICATE OF INSERVICE INSPECTION

COMPONENTS EXAMINED:

CLASS 1

Component	Iso No
Reactor Vessel	VS-01-06
Main Steam	1.2-03/-04
Feedwater	1.2-05/-06
Core Spray	1.2-08
High Pressure Coolant Injection	1.2-09
CRD Return	1.2-12A
Residual Heat Removal	1.2-14/-15/-16
RCIC-Steam	1.2-17
Recirculation Pump 'A' Suction	1.2-19A
Recirculation Manifold 'A' and Risers E,F,G,H	1.2-20
Recirculation System 'B' Suction and Bypass	1.2-21A
Recirculation Manifold 'B' and Risers A,B,C,D	1.2-22
Reactor Head Spare	1.2-23
Reactor Head Vent	1.2-24
Standby Liquid Control	1.2-27
Reactor Vessel Instrumentation N-11A	1.2-28
Reactor Vessel Instrumentation N-12A	1.2-30
Reactor Vessel Instrumentation N-16B	1.2-34

IVVI

Component	Iso No
Guide Rod Bracket	VS-01-28
Ledge Segment Plates	VS-02-11
Core Plate	VS-03-02<1>
Top Guide	VS-04-01
Sample Holder	VS-01-31

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part B, page 3 of 3

- | | | |
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CERTIFICATE OF INSERVICE INSPECTION

COMPONENTS EXAMINED:

CLASS 2

Component	Iso No
RHR Heat Exchanger	2.1-01
Residual Heat Removal	2.2-33/-34/-36/ -37B/-39/-40/-43
High Pressure Coolant Injection	2.2-44/-45/-47
Core Spray	2.2-48/-51/-52A
Main Steam	2.2-54/-55/-56
Scram Discharge Volume	2.2-60/-61

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part C, page 1 of 1

- | | | |
|--|---|---|
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| 6) National Board Number of Unit: N/A | Gross Generating Capacity: 565 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 December 1, 1999 through May 27, 2001. The specific details and associated records of the examinations are on file at IES Utilities Inc.

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part D, page 1 of 5

- | | | |
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COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 1						
Component	Description	ISI Report	ISI Examination	ISI Iso	ASME XI Category	Results
RPV Head	HCC-B002 (Stud 20 -40)	I01093	UT	VS-01-06	B-A	Accepted by evaluation (AR 25397)
	HCC-C001 (Stud 20 - 40)	I01094	UT, MT	VS-01-06	B-A	Accepted
Main Steam	MSC-K011A	I01010	VT-3	1.2-03	F-A	Accepted
Main Steam	PSV-4405 VALVE BODY	I01208	VT-3	1.2-03	B-M-2	Accepted
	PSV-4405 BOLTING	I01207	VT-1	1.2-03	B-G-2	Accepted
	MSD-K034	I01015	VT-3	1.2-04	F-A	Accepted
Feedwater	FWB-K036	I01021	VT-3	1.2-05	F-A	Accepted
	FWC-K020	I01026	VT-3	1.2-06	F-A	Accepted
	FWD-K014	I01027	VT-3	1.2-06	F-A	Accepted
Core Spray	CSB-F002	I01028	PT, UT	1.2-08	B-F	Accepted
	CSB-F004	I01030	PT, UT	1.2-08	B-F	Accepted
High Pressure Coolant Injection	PSA-K015	I01032	VT-3	1.2-09	F-A	Accepted
Control Rod Drive Return	CRA-K017AA	I01051	VT-3	1.2-12A	F-A	Accepted by repair (AR 25237)
Residual Heat Removal	RHB-F003	I01055	PT, UT	1.2-14	B-F	Accepted
	RHB-K008	I01057	VT-3	1.2-14	F-A	Accepted
	RHC-K016	I01058	VT-3	1.2-15	F-A	Accepted
	RHD-K005	I01059	VT-3	1.2-16	F-A	Accepted
Reactor Core Isolation Cooling	RSA-K024AA	I01061	VT-3	1.2-17	F-A	Accepted
Recirculation Pump 'A' Suction	RCA-K017	I01063	VT-3	1.2-19A	F-A	Accepted
Recirculation Manifold 'A' and Risers E,F,G,H	RMA-J002	I01065	PT, UT	1.2-20	B-J	Accepted
	RMA-J008	I01066	PT, UT	1.2-20	B-J	Accepted
	RRF-D001	I01067	UT	1.2-20	B-D	Accepted
	RRF-D001 Inner Rad	I01067	UT	1.2-20	B-D	Accepted
	RRH-J005	I01069	PT, UT	1.2-20	B-J	Accepted
Recirculation System 'B' Suction and Bypass	RBB-J001	I01070	PT, UT	1.2-21A	B-J	Accepted
	RBB-K005A	I01071	VT-3	1.2-21A	F-A	Accepted
	RCB-J030	I01203	PT, UT	1.2-21A	B-J	Accepted
	RCB-K029	I01072	VT-3, PT	1.2-21A	F-A/B-K	Accepted

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

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COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 1 con't						
Component	Description	ISI Report	ISI Examination	ISI Iso	ASME XI Category	Results
Recirculation Manifold 'B' and Risers A,B,C,D	RRA-J005	I01076	PT, UT	1.2-22	B-J	Accepted
	RRB-J007	I01078	PT, UT	1.2-22	B-J	Accepted
Reactor Head Spare	HSB-D001	I01080	UT	1.2-23	B-D	Accepted
	HSB-D001 Inner Rad	I01080	UT	1.2-23	B-D	Accepted
	HSB-FLG-BOLTING	I01081	VT-1	1.2-23	B-G-2	Accepted
Reactor Head Vent	HVA-FLG-BOLTING	I01116	VT-1	1.2-24	B-G-2	Accepted
Standby Liquid Control	LCA-F002	I01082	PT	1.2-27	B-F	Accepted
	LCA-J025	I01083	PT	1.2-27	B-J	Accepted
	LCA-J026	I01084	PT	1.2-27	B-J	Accepted
	LCA-J025A	I01085	PT	1.2-27	B-J	Accepted
	LCA-J027	I01086	PT	1.2-27	B-J	Accepted
	LCA-K003A	I01087	VT-3	1.2-27	F-A	Accepted
Reactor Vessel Instrument. N-11A	VIA-D001 VIA-D001 Inner Rad.	I01088 I01088	UT UT	1.2-28 1.2-28	B-D B-D	Accepted Accepted
Reactor Vessel Instrument. N-12A	VIC-D001 VIC-D001 Inner Rad.	I01089 I01089	UT UT	1.2-30 1.2-30	B-D B-D	Accepted Accepted
Reactor Vessel Instrument. N-16B	VIF-D001 VIF-D001 Inner Rad. VIF-F002	I01090 I01090 I01091	UT UT PT	1.2-34 1.2-34 1.2-34	B-D B-D B-F	Accepted Accepted Accepted
Reactor Pressure Vessel Internals	GUIDE ROD BRT(0)	I01095	VT-3	VS-01-28	B-N-1	Accepted
	SHROUD LEDGE 0-180	I01095	VT-3	VS-02-11	B-N-1	Accepted
	CORE PLATE	I01095	VT-3	VS-03-02<1>	B-N-1	Accepted
	TOP GUIDE	I01095	VT-3	VS-04-01	B-N-1	Accepted
	SAMPLE HOLDER-108 DEG	I01095	VT-3	VS-01-31	B-N-1	Accepted

CLASS 1 PRESSURE TESTS						
Class 1 System Leakage Test	STP 3.10.1-01	I01092	VT-2	ISONO-P	B-P	Accepted

**THIRD TEN YEAR INTERVAL
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| 6) National Board Number of Unit: N/A | Gross Generating Capacity: 565 MWE | |

COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 2						
Component	Description	ISI		ISI Iso	ASME XI	Results
		Report	Examination		Category	
RHR Heat Exchanger	HEA-CA-05	I01098	UT	2.1-01	C-A	Accepted
	HEA-CB-06	I01099	MT, UT	2.1-01	C-B	*Accepted
	HEA-CB-06 Inner Rad.	I01099	UT	2.1-01	C-B	Accepted
	HEA-CC-08(03)	I01101	VT-3	2.1-01	F-A	Accepted
Residual Heat Removal	RHB-CE076	I01102	VT-3	2.2-33	F-A	Accepted
	RHC-CE022	I01103	VT-3	2.2-34	F-A	Accepted
	RHC-CE029	I01104	VT-3	2.2-34	F-A	Accepted
	RHC-CE060	I01105	VT-3	2.2-34	F-A	Accepted
	RHC-CF080	I01106	MT, UT	2.2-34	C-F-2	Accepted
	RHE-CE029	I01107	VT-3	2.2-36	F-A	Accepted
	RHE-CF016	I01108	MT, UT	2.2-36	C-F-2	Accepted
	RHF-CF004	I01109	MT, UT	2.2-37B	C-F-2	Accepted
	RHF-CF047	I01110	MT, UT	2.2-37B	C-F-2	Accepted
	RHI-CF076	I01111	MT, UT	2.2-39	C-F-2	Accepted
	RHI-CF001	I01112	MT, UT	2.2-40	C-F-2	Accepted
	RHI-CF080	I01113	MT, UT	2.2-40	C-F-2	Accepted
	RHI-CF087	I01114	MT, UT	2.2-40	C-F-2	Accepted
	RHM-CE011	I01115	VT-3, MT	2.2-43	F-A, C-C	Accepted
High Pressure Coolant Injection	HPA-CF033	I01117	MT, UT	2.2-44	C-F-2	Accepted
	HPB-CE047	I01118	VT-3	2.2-45	F-A	Accepted
	HPB-CF019	I01120	MT, UT	2.2-45	C-F-2	Accepted
	HPB-CF48	I01121	MT, UT	2.2-45	C-F-2	Accepted
	HPD-CE023	I01126	VT-3	2.2-47	F-A	Accepted
	HPD-CE030	I01127	VT-3, MT	2.2-47	F-A, C-C	Accepted
Core Spray	CSA-CE030	I01129	VT-3	2.2-48	F-A	Accepted
	CSA-CF040	I01130	MT, UT	2.2-48	C-F-2	Accepted
	CSD-CE007	I01131	VT-3	2.2-51	F-A	Accepted
	CSE-CE012	I01132	VT-3	2.2-52A	F-A	Accepted
Main Steam	MSB-CE021	I01133	VT-3	2.2-54	F-A	Accepted
	MSC-CE016	I01138	VT-3	2.2-55	F-A	Accepted
	MSD-CE022	I01139	VT-3	2.2-56	F-A	Accepted
Scram Discharge Volume	SDS-CE001B	I01142	VT-3	2.2-60	F-A	Accepted
	SDN-CF010	I01143	MT, UT	2.2-61	C-F-2	Accepted

* Examination Technique was demonstrated to the ANII in accordance with IWA-2240

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COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 2 PRESSURE TESTS						
Component	Description	ISI		ISI ISO	ASME XI Category	Results
		Report	Examination			
High Pressure Coolant Injection	STP NS520001	I01144	VT-2	ISONO-P	C-H	Accepted
Standby Liquid Control	STP NS530001	I01145	VT-2	ISONO-P	C-H	Accepted
Main Steam	STP NS830003	I01146	VT-2	ISONO-P	C-H	Accepted
Residual Heat Removal (LPCI)	STP490003	I01147	VT-2	ISONO-P	C-H	Accepted
Containment Penetrations	STP 3.6.1.1-08 X-19, X-23A/B, X-24A/B, X-48, X-55, X-35A	N/A	Relief Request PR-002	ISONO-P	C-H	Accepted

**THIRD TEN YEAR INTERVAL
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- | | | |
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IWE COMPONENTS						
Component	Description	ISI Report	Exam Method	ISI ISO	ASME XI Category	Results
General Visual	STP 3.6.1.1-01	I01161	VT	N/A	E-A	Accepted
Drywell Interior	Above 822' (0°-360°)	I01162	VT-3	N/A	E-A	Accepted
	805 to 822 (0°-360°)	I01163	VT-3	N/A	E-A	Accepted
	776 to 798 (90°-180°)	I01164	VT-3	N/A	E-A	Accepted
	757 to 776 (180°-270°)	I01165	VT-3	N/A	E-A	Accepted
	742 to 757 (180°-270°)	I01166	VT-3	N/A	E-A	Accepted
	Moist. Barrier (180°-270°)	I01167	VT-3	N/A	E-D	Accepted
	Drywell Stab. #4	(135°) X-58F	I01168	VT-3	N/A	E-A
Bolting		I01168	VT-1	N/A	E-G	Accepted
Drywell Stab. #5	(180°) X-58E	I01169	VT-3	N/A	E-A	Accepted
	Bolting	I01169	VT-1	N/A	E-G	Accepted
Torus Interior	Bays 1,2,3,4 (above water line)	I01170	VT-3	N/A	E-A	Accepted
	Bays 9,10,11,12 (above water line)	I01171	VT-3	N/A	E-A	Accepted
Torus Exterior	Bays 1,2,3,4	I01172	VT-3	N/A	E-A	Accepted
	Bays 9,10,11,12	I01183	VT-3	N/A	E-A	Accepted
Torus Interior	Bays 1 -16 (below water line)	I01184	VT-1	N/A	E-C	Accepted ^(Note 1)
Torus Bay #15	Area below MO-2001	I01185	VT-1	N/A	E-C	Accepted ^(Note 2)
Torus Hatch	N200B Bolting (28 ea)	I01186	VT-1	N/A	E-G	Accepted
DW to Torus	Vent #C @ 60°	I01187	VT-3	N/A	E-A	Accepted
	Vent #D @ 300°	I01188	VT-3	N/A	E-A	Accepted
	Vent #H @ 210°	I01189	VT-3	N/A	E-A	Accepted

Note 1 – Section of Torus Girder Weld was found missing and repaired using Code Case N-516-1.

Note 2 – Degradation of coating increased in size from 1" X 2" to 2 5/8" X 3". However, no degradation of Base Metal was detected. AR 25824 was written.

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part E, page 1 of 1

- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 MWE | |

ADDITIONAL EXAMINATION IDENTIFICATION RECORDS
(Additional Examinations were performed to the 1992 Edition of ASME Section XI
(ref. Relief Request NDE-R041))

Class 1					
Original Component Examined	Expanded Component	ISI Report Number	Examination	ASME XI Category	Results
CRA-K017AA	CRA-K012	I01205	VT-3	F-A	Accepted
	CRA-K015A	I01206	VT-3	F-A	Accepted
	CRA-K026	I01204	VT-3	F-A	Accepted
HCC-B002 (Stud 20-40)	HCC-B002 (Stud 40 - 60)	I01209	UT	B-A	Accepted

SUCCESSIVE EXAMINATION IDENTIFICATION RECORDS

Class 1					
Component Examined	Previous ISI Report Number	ISI Report Number	Examination	ASME XI Category	Results
HEA-CC-08(02)	196094	I01100	VT-3	F-A	Accepted
RRF-F002	199154	I01068	UT	B-F	Accepted

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part F, page 1 of 2

- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 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>
17-00-01	1	MSRV Main Valve Body S/N 201	CWO A43913	Machined pilot flange
17-00-03	1	MSRV Pilot Valves	PO B19740	Repairs made to achieved acceptable test
17-00-06	2	CAD piping	EMA A41400	Installed new 2 " isolation valve (V43-0573)
17-00-07	2	CAD piping	EMA A45620	Replaced rupture discs with plugs
17-01-01	2	RHF-CE068 (GBB-004-SS-211)	EMA A48638	Shortened extension piece
17-01-03	2	RHK-CE008B (GLE-008-SS-240)	PWO 1114064	Replaced
17-01-05	1	CUA-K007 (DCA-006-H-1)	CWO A39609	Replaced two bolts and nuts on pipe clamp
17-01-06	1	CUA-K020AA (DCA-006-SS-050)	CWO A39610	Replaced two bolts and nuts on pipe clamp
17-01-09	MC	X58E Inspection Hatch	PWO 1113880	Replaced one stud and nut
17-01-10	2	RHC-CE024A/B (HBB-024-SS-227A/B)	EMA A48639	Modified pipe clamp by adding shear lug
17-01-11	MC	Torus Ring Girder	CWO A54363	Removed small metal sample to support weld repair
17-01-12	MC	Torus Ring Girder	CWO A53816	Repaired by welding area not previously welded (CC N-516-1)
17-01-13	1	Jet Pump Riser Brace Pad	CWO A48636	Removed small sample of metal
17-01-14	1	MO 4424	CWO A54224	Replaced disc
17-01-15	2	RHR Heat Exchanger	CWO A53829	Blend ground weld HEA-CB-6
17-01-16	2	HCU's	See NIS-2 for WOs	Replaced Accumulator Cylinders
17-01-17	MC	Torus Shell	CWO A54362	Removed small metal sample to support weld repair
17-01-18	2	XS 2618B	PWO 1115494	Installed explosive actuated kit assembly
17-01-19	1 & 2	Various	ECP 1638	Welded mounts for vibration sensors to pipe clamps
17-01-20	1	MO 2400	CWO A53868	Machined pressure seal area on bonnet

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part F, page 2 of 2

- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 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>
17-01-21	1	MSRV Pilot Valve	PWO 1113092	Replaced S/N 218 with S/N 207
17-01-22	1	MSRV Pilot Valve	PWO 1113093	Replaced S/N 226 with S/N 201
17-01-23	1	MSRV Pilot Valve	PWO 1113094	Replaced S/N 189 with S/N 200
17-01-24	1	MSRV Pilot Valve	PWO 1113097	Replaced S/N 141 with S/N 176
17-01-25	1	MSRV Pilot Valve	PWO 1113098	Replaced S/N 203 with S/N 227
17-01-26	1	MSRV Pilot Valve	PWO 1113099	Replaced S/N 202 with S/N 199
17-01-27	2	V24-0023	CWO A48334A	Replaced Hinge Pin Assembly
17-01-28	2	EBB-014-SS-013	CWO A50873	Replaced snubber
17-01-29	MC	JX105A&C	MWO 1115084/86	Replaced penetration
17-01-30	2	EBB-014-SS-016	CWO A50876	Replaced snubber
17-01-31	2	EBB-014-SS-014	CWO A50874	Replaced snubber
17-01-32	2	EBB-014-SS-015	CWO A50875	Replaced snubber
17-01-33	2	MO 1055	MWO 1115104	Replaced valve
17-01-34	2	MO 1054	MWO 1115105	Replaced valve
17-01-35	2	EBB-01.4-SS-016A	CWO A50877	Replaced snubber
17-01-36	2	V03-0008	CWO A55493	Repaired valve body to bonnet leak
17-01-37	2	CV4312	CWO A52222	Machining of guide slots on disc

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

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- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 MWE |

Form NIS-2's

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

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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 IES Industries Date 1/28/2000
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 A43913
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by IES Utilities, Inc. 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 1
5. (a) Applicable Construction Code ASME 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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Main Valve Body	Target Rock	S/N 201	N/A	Spare (removed from PSV4402)	1976	Repaired	YES

7. Description of Work: Machined pilot flange on main valve body S/N 201.
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp _____ °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: Machined surfaced defects from pilot flange on main valve body S/N 201. The machining operation eliminated
Applicable Manufacturer's Data Reports to be attached
- defects, however revealed a different area with indications. The new indications were evaluated on Action Request 18124 and
found acceptable per ASME III, W63 Addenda, paragraph N323.3 and General Electric Specification 21A9206, Rev. 7. Final
repaired (machined) area was subjected to a MT examination and preservice VT-3 (P99143) with acceptable results.

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 [Signature] GL Equipment Monitoring Date 2/4 2000
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 Hartford Steam Boiler I & I Co.
of Hartford, Conn. have inspected the components described in this Owner's Report
during the period 12/6/99 to 2/8/00, 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 11872 ANI, 14225*
Inspector's Signature National Board, State, Province, and Endorsements

Date 2/8/ 2000

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 02-22-00
 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 PO B19740
 Address _____ Repair Organization to P. O. No., Job No., etc. _____

3. Work Performed by NWS Technologies Type Code Symbol Stamp None
 Name _____ Authorization No. None
131 Venture Blvd. Spartanburg, SC 29301 Expiration Date None

4. Identification of System: Main Steam Safety Relief Valves - Class 1
 5. (a) Applicable Construction Code ASME 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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Filter Plug	Target Rock	S/N 729	N/A	PSV-4405 (S/N 176)	1991	Replacement	NO
Pilot Disc	Target Rock	S/N 619	N/A	PSV-4400 (S/N 207)	1993	Replacement	NO
PreLoad Spacer	Target Rock	S/N 603	N/A	PSV-4400 (S/N 207)	1997	Replacement	NO
Filter Port Area	Target Rock	N/A	N/A	PSV-4401 (S/N 201)	1976	Repair	YES
Filter Port Area	Target Rock	N/A	N/A	PSV-4402 (S/N 200)	1976	Repair	YES
Filter Port Area	Target Rock	N/A	N/A	PSV-4406 (S/N 227)	1976	Repair	YES
Filter Port Area	Target Rock	N/A	N/A	PSV-4407 (S/N 199)	1976	Repair	YES

7. Description of Work: Spare Main Steam Safety Relief Valves were tested and repaired.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
 Other Pressure N/A psi Test Temp N/A ° F

No pressure test is required at this time. A system leakage test will be performed when installed.

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: MSRVs (S/Ns 176, 199, 200, 201, 207, and 227) were removed for testing during RFO16. These valves were
Applicable Manufacturer's Data Reports to be attached
sent to NWS for testing. All valves were required to be repaired prior to obtaining acceptable test results. The Pilot Disc (S/N
619) and Preload Spacer (S/N 603) were replaced on S/N 207. The Filter Plug (S/N 729) was replaced on S/N 176. S/Ns 199,
200, 201, and 227 required the filter port area to be machined. The final machined area was examined by the liquid penetrant
method and found acceptable. No pressure testing is required at this time, a system leakage test will be performed when
reinstalled.

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 Scott Rusler for L Equipment Monitoring Date Feb. 22, 2000
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 Hartford Steam Boiler I & I Co.
of Hartford, Conn. have inspected the components described in this Owner's Report
during the period 1-26-00 to 3/20/00, 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]
Inspector's Signature

Comraissions NB 11872 ANE, 1422 IA
National Board, State, Province, and Endorsements

Date 3/20/, 2000

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 11/06/00
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 EMA A41400 (CAD Piping Modification)
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None

4. Identification of System: Containment Atmosphere Dilution (Class 2)
5. (a) Applicable Construction Code ASME, III, NC 19 71 Edition No 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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
2" X 2" X 2" 6000#, SW, Tee	Dubose	N/A	N/A	Heat # R109L	1991	Replacement	No
2" X 1/2" Reducer	Dubose	N/A	N/A	Heat # 039G	1991	Replacement	No
2", Sch 160, A106, Pipe	Vision Metals	N/A	N/A	Heat # 151234	1999	Replacement	No
2" SW Valve	Velan	4-1-3	N/A	V43-0573	1973	Replacement	No

7. Description of Work: Installed new 2" isolation valve and a new vent line on CAD system piping.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure 1920 psi Test Temp 60 ° 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: CAD system piping was modified by adding a 2" isolation valve, new 2" pipe, a 2" tee, and a 1/4" vent line. ASME, Section XI, Code Case N-416-1 was utilized in lieu of a hydrostatic test. The initial review of the 2" X 1/4" insert was missed. Action Request 22752 has documented and resolved the missed review.
 Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed [Signature] GL Equipment Monitoring Date Nov 7 2000
 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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 10/11/00 to 11/07/00, 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 11047 ANIC 12907A
 Inspector's Signature National Board, State, Province, and Endorsements

Date Nov 07, 2000

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 11/07/00
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 EMA A45620(CAD Vessel Modification)
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Containment Atmosphere Dilution (Class 2)
5. (a) Applicable Construction Code ASME, VIII 19 71 Edition No Addenda 1205 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 / N2 Tank ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Rupture Disk Plug	CP Industries	55155H	N/A	CWO A46550 / 1T007C	2000	Replacement	No
Rupture Disk Plug	CP Industries	55156H	N/A	CWO A46551 / 1T007D	2000	Replacement	No
Rupture Disk Plug	CP Industries	55157H	N/A	CWO A46552 / 1T007E	2000	Replacement	No
Rupture Disk Plug	CP Industries	55158H	N/A	CWO A46553 / 1T007F	2000	Replacement	No
Rupture Disk Plug	CP Industries	55159H	N/A	CWO A46554 / 1T007G	2000	Replacement	No
Rupture Disk Plug	CP Industries	55150H	N/A	CWO A46555 / 1T007H	2000	Replacement	No
Rupture Disk Plug	CP Industries	55154H	N/A	CWO A46556 / 1T004B	2000	Replacement	No
Rupture Disk Plug	CP Industries	55153H	N/A	CWO A46557 / 1T004A	2000	Replacement	No
Rupture Disk Plug	CP Industries	55151H	N/A	CWO A45620 / 1T007A	2000	Replacement	No
Rupture Disk Plug	CP Industries	55152H	N/A	CWO A45621 / 1T007B	2000	Replacement	No

7. Description of Work: Replaced rupture disks on N2 storage tanks with plugs (quantity of ten)
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
- Other Pressure 2080 psi Test Temp 80 °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: CAD system storage tanks were modified by removal of individual storage tank rupture disks and replacement with plugs. Relief protection is provided by a single relief valve on a common header (see EMA A45620 for details). Replacement plugs received a hydrostatic test by the Supplier and a system operating leak test (P00003) following installation.
-
- Applicable Manufacturer's Data Reports to be attached

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 APARR GL Equipment Monitoring Date Nov 7 2000
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 09/29/00 to 11/07/00, 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. Beltman Commissions NB 11047 ANIC 1290 JA
Inspector's Signature National Board, State, Province, and Endorsements

Date NOV 07, 2000

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 02/20/01
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 EMA A48638
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: RHR HX 1E-201A Discharge Header Snubber, GBB-004-SS-211 (Class 2)
5. (a) Applicable Construction Code ANSI B31.7 19 69 Edition 71 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 / N2 Tank ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Snubber Extension	Bergen Patersen	N/A	N/A	Extention piece for snubber location GBB-004-SS-211	1971	Repaired	No

7. Description of Work: Shortened extension piece by 1"
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp _____ °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: The front extension on snubber GBB-004-SS-211 was shortened by 1". Extension piece was shortened to improve available snubber travel at maximum thermal movement (see EMA 48638). Extension was cut, shortened, and re-welded using WPS P1-AT-Lh rev. 8. Completed installation received a pre-service VT-3 examination and recorded on report = P00001.
-
- Applicable Manufacturer's Data Reports to be attached

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 *[Signature]* GL Equipment Monitoring Date February 27 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period _____ to _____, 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 NR 7542 NI Ia1046
Inspector's Signature National Board, State, Province, and Endorsements

Date 3-28, 2001

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 03/13/01
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 1114064
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None

4. Identification of System: RHR Loop "B" Drywell Spray Supply Line Snubber
5. (a) Applicable Construction Code ANSI B31.7 19 69 Edition 71 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 / N2 Tank ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
LE-008-SS-240	Bergen Paterson	DA-012	N/A	PWO 1114064	Rebuilt 1999	Replaced	No

7. Description of Work: Replaced snubber S/N DA-061 with rebuilt snubber DA-012.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure _____ psi Test Temp _____ °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, S/N DA-061, installed at location GLE-008-SS-240 was removed for testing. Although snubber met all test criteria, the snubber showed signs of degradation. Rebuilt snubber, S/N DA-012, was installed at location GLE-008-SS-240. DA-012 was rebuilt on PWO 1108670 with no load bearing parts requiring replacement.
Applicable Manufacturer's Data Reports to be attached

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 Warden for GL Equipment Monitoring Date April 3 2001
 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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 1-22-01 to 4-3-01, 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.

William Mueller Commissions NB 2542 N, I Ia 1046
 Inspector's Signature National Board, State, Province, and Endorsements

Date 04-03, 2001

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 05/14/01
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 A39609
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None

4. Identification of System: Bolting pipe hanger DCA-006-H-1 (Reactor Water Clean-up Suction from Recirc Pump)

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

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / N2 Tank ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Two bolts	Cardinal	N/A	N/A	A193 B7, Ht# A2113, Code A2	1986	Replacement	No
Two nuts	Cardinal	N/A	N/A	A194 2H, Ht# Y592608, Code A2	1986	Replacement	No

7. Description of Work: Replaced two 5/8" bolts & nuts on pipe clamp for hanger DCA-006-H-1.

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: Replaced two 5/8" bolts & nuts on pipe clamp for hanger DCA-006-H-1. Completed hanger assembly received a pre-service VT-3 examination documented on report # P01030.
Applicable Manufacturer's Data Reports to be attached

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed [Signature] GL Equipment Monitoring Date May 15 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 2-13-01 to 5-15-01, 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.

William Muela Commissions NB7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 15, 2001

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 05/14/01
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 A39610
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None

4. Identification of System: Bolting pipe clamp on snubber DCA-006-SS-050 (Reactor Water Clean-up Recirc Supply Header)

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

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / N2 Tank ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Two bolts	Cardinal	N/A	N/A	A193 B7, Ht# C66935, Code B3	1992	Replacement	No
Two nuts	Nova Machine	N/A	N/A	Heat Code # SXA	2000	Replacement	No

7. Description of Work: ^{1/2"} ~~3/8"~~ Replaced two bolts & nuts on pipe clamp for snubber DCA-006-SS-050.

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: ^{1/2} Replaced two ~~3/8~~ bolts & nuts on pipe clamp for snubber DCA-006-SS-050. Completed snubber assembly received a pre-service VT-3 examination documented on report # P01053.
Applicable Manufacturer's Data Reports to be attached

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] GL Equipment Monitoring Date May 15 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-20-01 to 5-15-01, 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.

William Mueller Commissions NB7542 N.I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 15, 2001

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 05/17/01
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 1113880
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None

4. Identification of System: Primary Containment Vessel Stabilizer Inspection Hatches

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)
One Stud (1"-8X8")	Daniel	Heat Code # 208	N/A	PWO 1113880 / SUS 59.00	1973	Replacement	No
Two Nuts (1"-8)	Cardinal	Heat # MX-2374	N/A	PWO 1113880 / SUS 59.00	1985	Replacement	No

7. Description of Work: Replaced one stud and two nuts on the primary containment vessel stabilizer inspection hatch.

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.
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FORM NIS-2 (Back)

9. Remarks: Replaced one stud and two nuts on the primary containment vessel stabilizer inspection hatch. Original stud & nuts were dropped and could not be retrieved. New bolting received a pre-service VT-1 and was documented on report P01056.

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] GL Equipment Monitoring Date May 18, 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 5-8-01 to 5-18-01, 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.

William Mueller Commissions NB 7543 I, N Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May - 18, 2001

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 05/18/01
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 EMA A48639
Address _____ Repair Organization to P. O. No., Job No., etc.
3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: RHR Loop "A" Shutdown Cooling Header
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)
Shear Lug	Mills Alloy	Heat # 89812-25	N/A	CWO A48639 / HBB-024	1979	Replacement	No
Pipe Clamp	Bergen Paterson	N/A	N/A	CWO A48639 / HBB-024-SS-227A&B	Original Construction	Repaired	No

7. Description of Work: Modified pipe clamp and added a shear lug to RHR piping HBB-024.
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: The trapeze style pipe clamp for snubbers HBB-024-SS-227A & B was originally designed with no means of preventing rotation. The pipe clamp was modified and a 2" X 1" X 6.5" shear lug was welded to the RHR suction line to prevent clamp rotation. The modification has been reviewed and approved on EMA A48639. Shear lug attachment welds received a pre-service MT examination (report # P01033) and the reinstalled snubbers received a pre-service VT-3 examination (report # P01032).

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Scott Peeler for GL Equipment Monitoring Date May 19, 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-2-01 to 5-21-01, 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.

William Maxwell Commissions NB7542 I, N Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 21, 2001

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 05/18/01
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 A54363
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) 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 Ring Girder)

5. (a) Applicable Construction Code ASME, Section 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	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 Ring Girder (Primary Containment)	Horton Mfg. By Chicago, Bridge & Iron	Contract # 68-2968	N/A	CWO A54363 / SUS 59.00	1971	Repaired	No

7. Description of Work: Removed small metal sample from ring girder for chemical analysis.

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: Removed small (approximately 1" X 1 1/4" X 1/8") sample from a low stressed area on the ring girder between bays one & two. The sample was needed to verify chemical analysis to assist in underwater welding of torus-to-shell fillet weld. Girder edge where sample was removed was blended to a smooth transition.

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 Butler for GL Equipment Monitoring Date May 19, 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 5-2-01 to 5-19-01, 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.

William Mulla Commissions NB7542 I, N Ia1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 19, 2001

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 05/19/01
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 A53816
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 6/20/01 None
4. Identification of System: Primary Containment (Torus Ring Girder) S
5. (a) Applicable Construction Code ASME, Section III 19 68 Edition 68 Addenda _____ Code Case. _____
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92 & Code Case N-516-1
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 Ring Girder (Primary Containment)	Horton Mfg. By Chicago, Bridge & Iron	Contract # 68-2968	N/A	CWO A53816 / SUS 59.00	1971	Repaired	No

7. Description of Work: Repaired Torus Ring Girder by welding area that was not previously welded.
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 the IWE Augmented Examination of the Torus Underwater portion, a section of weld for the Torus Ring Girder in Bay 1 was found not to have been completed. Under water welding was used per Code Case N-516-1 to complete the missing weld. A VT-1 (P01055) was completed on the final weld per the criteria in the Code Case and found acceptable. A video tape was used to document the final weld inspection. A pressure test is not required per Relief Request MC-P001.

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Scott Puffer for GL Equipment Monitoring Date May 19, 2001
 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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 5-8-01 to 5-21-01, 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.

William Mueller Commissions NB 7542 I, N Ia 1046
 Inspector's Signature National Board, State, Province, and Endorsements

Date May 21, 2001

THIS REVISION IS MADE TO CORRECT THE APPLICABLE CONSTRUCTION CODE TO ASME SECTION III 1968 EDITION WITH THE SUMMER 1968 ADDENDA.

GRAY for 6/26/01 William Mueller 6/27/01
 OWNER OR OWNER'S DESIGNEE DATE ANII DATE

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 05/19/01
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 A48636
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 Vessel, Jet Pump Riser Brace Pads (Class 1)
5. (a) Applicable Construction Code ASME, Section III 19 65 Edition S67 Addenda 1332-4, 1335-2, 1420 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)
Jet Pump Riser Brace Pad	Chicago, Bridge & Iron	Contract # 68-2967	3663	CWO A48636 / SUS 62.00	1972	Repaired	No

7. Description of Work: A small sample was removed from four jet pump riser brace pads for analysis.
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: EPRI, the BWRVIP, and the NRC have funded a project to determine the viability of a welded repair for certain BWR vessel internal components. In order to support this activity, four samples from four separate jet pump riser brace pads were obtained. The samples taken resulted in a 1/4" diameter X 1/16" deep round divot. The removal of the material was approved under EMA 48636 and accepted. An enhanced VT-1 (this exceeds the required VT-1) of the divot was completed and accepted. Pressure test is not required. (EVT-1 Rpt # P01050)
 @5/20/01

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Scott Paulsen for GL Equipment Monitoring Date May 19, 2001
 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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-24-01 to 5-19-01, 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.

William Mueller ^{w. d. v. 01} Commissions NB 7542 N I I 21046
 Inspector's Signature National Board, State, Province, and Endorsements

Date May - 19, 2001

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 05/19/01
 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 A54224
 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: MO 4424, Main Steam Line Drain Outboard Isolation (Class 1)
 5. (a) Applicable Construction Code ASME, DP&VC 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 Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Disc	Anchor Darling	U3603	N/A	CWO A54224 / SUS 83.01	1987	Replacement	Yes

7. Description of Work: MO 4424 failed it's LLRT, valve disc was replaced

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: MO 4424 failed it's Local Leak Rate Test (LLRT) and required to be disassembled and repaired. The disc was found to have two steam cuts and required replacement. A new disc (S/N U3603) was installed.

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 Bowler for GL Equipment Monitoring Date May 21, 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 5-5-01 to 5-22-01, 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.

William Meulla Commissions NB 7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 22, 2001

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 05/18/01
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 A53829
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None

4. Identification of System: "A" RHR Loop Heat Exchanger
5. (a) Applicable Construction Code ASME, Section III, 19 68 Edition W68 Addenda N/A Code Case.
CI "C" (shell Side)

(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)
"A" Loop RHR Heat Exchanger	Berlin Chapman	721201-2	4595	CWO A53829 / 1E201A	1971	Repaired	Yes

7. Description of Work: Blend ground toe of top nozzle-to-shell weld to remove weld overlap.

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: MT examination of top nozzle-to-shell weld revealed indications at toe of weld. This area was blend ground to remove weld overlap. Weld size was verified before & after grinding to design drawing. As-left weld was found acceptable during ISI MT examination. (I01099)

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 [Signature] GL Equipment Monitoring Date May 24 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 5-4-01 to 5-24-01, 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.

William Mueller Commissions NB7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 24, 2001

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 05/22/01
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 See Below
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, Hydraulic Control Units (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 Work Order / Equip ID	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
HCU 1S220 (38-31)	General Electric Co.	C0094	N/A	CWO A50951 / SUS 55.00	1978	Replacement	Yes
HCU 1S220 (34-07)	General Electric Co.	H1712	N/A	CWO A50953/ SUS 55.00	1978	Replacement	Yes
HCU 1S220 (14-19)	General Electric Co.	C0162	N/A	CWO A50954 / SUS 55.00	1978	Replacement	Yes
HCU 1S220 (38-19)	General Electric Co.	H1718	N/A	CWO A51058 / SUS 55.00	1978	Replacement	Yes
HCU 1S220 (06-15)	General Electric Co.	H1701	N/A	CWO A51059/ SUS 55.00	1978	Replacement	Yes
HCU 1S220 (14-23)	General Electric Co.	C0037	N/A	CWO A51060/ SUS 55.00	1978	Replacement	Yes
HCU 1S220 (38-27)	General Electric Co.	C0056	N/A	CWO A51061/ SUS 55.00	1978	Replacement	Yes

7. Description of Work: Hydraulic Control Units replaced.
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
- Other Pressure 1030 psi Test Temp 198 °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.

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FORM NIS-2 (Back)

9. Remarks: The Accumulator Cylinders for the HCU's were disassembled and inspected for degradation. If the degradation was only bad on one end the HCU was flipped. If the degradation was worse the HCU was replaced. The HCU's identified on the front of this NIS-2 were replaced as a result of the inspection. The list below shows the associated VT-2's that were completed in conjunction with the Class 1 Leak Test and accepted.

1S220(38-31) VT-2 (P01047) 1S220(34-07) VT-2 (P01046) 1S220(14-19) VT-2 (P01043)

1S220(38-19) VT-2 (P01052) 1S220(06-15) VT-2 (P01044) 1S220(14-23) VT-2 (P01042)

1S220(38-27) VT-2 (P01051)

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] GL Equipment Monitoring Date May 23 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-16-01 to 5-23-01, 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.

William Mulla Commissions NB 7542 N, I, Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 23, 2001

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 05/22/01
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 A54362
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Primary Containment (Class MC)
5. (a) Applicable Construction Code ASME, Section III, 19 68 Edition N/A Addenda N/A Code Case.
CI "B"
- (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	Chicago Bridge and Iron (CB&I)	Contract # 68-2968	N/A	CWO A54362/ SUS 59.00	1971	Repaired	No

7. Description of Work: A metal sample was taken from the torus shell to support calculation of the CE for underwater welding conducted under NIS-2 (17-01-12)
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.

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FORM NIS-2 (Back)

9. Remarks: A metal sample was taken from the torus shell proper. This sample was analyzed to determine the trace elements necessary to determine the Carbon Equivalent calculation in support of the weld repair performed in accordance with Code Case N-516-1. The area where the metal sample was removed was inspected by MT and UT (to determine remaining wall thickness). The area was then weld repaired and re-inspected by MT(P01054) and UT (to determine final thickness). All inspections were found acceptable. This is considered a Minor Repair and does not require a pressure test per relief request MC-P001.

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 BL Equipment Monitoring Date May 22, 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 5-2-01 to 5-23-01, 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.

William Mulla Commissions NB 7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 23, 2001

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 05/22/01
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 1115494
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) 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	Conax Buffalo	410	N/A	PWO 1115494 / XS2618B	1999	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 (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 (P01031).

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] GL Equipment Monitoring Date May 23 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 2-13-01 to 5-23-01, 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.

William Mulla Commissions NB 7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 23, 2001

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 05/22/01
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 ECP 1638
Address _____ Repair Organization to P. O. No., Job No., etc.
3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: See table for Start-up System Numbers
5. (a) Applicable Construction Code * ANSI B31.7 19 69 Edition N/A Addenda N/A Code Case.
**ANSI B31.1 68 N/A N/A
- (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)
HA-1 Loop "A"	Bergen Paterson	N/A	N/A	MWO 1115781 / SUS 62.00	1971	Repaired	No
HA-2 Loop "A"	Bergen Paterson	N/A	N/A	MWO 1115781 / SUS 62.00	1971	Repaired	No
HB-1 Loop "B"	Bergen Paterson	N/A	N/A	MWO 1115781 / SUS 62.00	1971	Repaired	No
HB-3 Loop "B"	Bergen Paterson	N/A	N/A	MWO 1115781 / SUS 62.00	1971	Repaired	No
H-1 (DLA-002-H1)	Bergen Paterson	N/A	N/A	MWO 1115781 / SUS 45.01	1971	Repaired	No
H-8 (DLA-002-H8)	Bergen Paterson	N/A	N/A	MWO 1115781 / SUS 45.01	1971	Repaired	No
H-5 (DLA-002-H5)	Bergen Paterson	N/A	N/A	MWO 1115781 / SUS 45.01	1971	Repaired	No
H-7 (DLA-002-H7)	Bergen Paterson	N/A	N/A	MWO 1115781 / SUS 83.02	1971	Repaired	No
H-16 Loop "B" (EBD-002-H16)	Bergen Paterson	N/A	N/A	MWO 1115782 / SUS 83.02	1971	Repaired	No
H-21 Loop "B" (EBD-002-H21)	Bergen Paterson	N/A	N/A	MWO 1115782 / SUS 83.02	1971	Repaired	No
H-2 Loop "C" (EBD-002-H2)	Bergen Paterson	N/A	N/A	MWO 1115782 / SUS 83.02	1971	Repaired	No

7. Description of Work: Welded mounts for vibration sensors to pipe clamps.
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.

* = Per FSAR 3.2 Table pipe supports for feedwater system inside the drywell and main steam up to the MSIVs (SUS 62.00 & 45.01)

** = Per FSAR 3.2 Table pipe supports on main steam down stream of the MSIVs. (SUS 83.02)

FORM NIS-2 (Back)

9. Remarks: Brackets (1" square bar stock) were welded to various pipe supports to attach vibration monitors. The only portion of this work considered a Section XI repair is welding to the pipe supports. The welding was performed by qualified welders in accordance with an ASME, Section IX, qualified procedure (P1-AT-Lh, rev. 8). Completed welds were visually examined.

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 [Signature] GL Equipment Monitoring Date May 25 2001
 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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-3-01 to 5-25-01, 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.

William Mueller Commissions NB 7542 N, I Ia 1046
 Inspector's Signature National Board, State, Province, and Endorsements

Date May 25, 2001

FORM NIS-2 (Back)

9. Remarks: Valve was disassembled for inspection and replacement of stem. The pressure seal area on the bonnet required some machining for a better fit during reassembly.

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 Barber for GL Equipment Monitoring Date May 23, 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 5-5-01 to 5-24-01, 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.

William Mueller Commissions NB 7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 24, 2001

FORM NIS-2 (Back)

9. Remarks: Pilot Valve S/N 218 was removed and pilot valve S/N 207 was installed. Prior to installation S/N 207 was repaired and documented on NIS-2 (17-00-03). A VT-2 (I01092) 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] GL Equipment Monitoring Date May 25 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-07-00 to 5-25-01, 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.

William Meulle
Inspector's Signature

Commissions

NB 7542 N, I Ia 1046
National Board, State, Province, and Endorsements

Date May 25, 2001

FORM NIS-2 (Back)

9. Remarks: Pilot Valve S/N 226 was removed and pilot valve S/N 201 was installed. Prior to installation S/N 201 was repaired and documented on NIS-2 (17-00-03). A VT-2 (I01092) 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] GL Equipment Monitoring Date May 25 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-7-00 to 5-25-01, 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 7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 25, 2001

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 05/25/01
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 1113094
Address _____ Repair Organization to P. O. No., Job No., etc.
3. Work Performed by Alliant Energy (IES Utilities) 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 200	N/A	PWO 1113094 / 83.04	1976	Replacement	Yes
Body to Pilot Bolt	Nova Machine	Item # 107 Heat Code DMH	N/A	PWO 1113094 / 83.04	1996	Replacement	No
Body to Pilot Nut	Target Rock	Item # 150 Heat # IN85326	N/A	PWO 1113094 / 83.04	1991	Replacement	No

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (17-00-03). This Pilot Valve was rotated in place of S/N 189. During removal of S/N 189 one bolt/nut was galled and required replacement.
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure 1030 psi Test Temp 198 °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 189 was removed and pilot valve S/N 200 was installed. Prior to installation S/N 200 was repaired and documented on NIS-2 (17-00-03). During removal of S/N 189 one bolt/nut was galled and required replacement. A preservice VT-1 (P01045) was completed prior to installation and accepted. A VT-2 (I01092) 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] GL Equipment Monitoring Date May 25 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-7-00 to 5-25-01, 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.

William Meuller Commissions NB 7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 25, 2001

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 05/25/01
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 1113097
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) 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 176	N/A	Work Order / SUS PWO 1113097 / 83.04	1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (17-00-03). This Pilot Valve was rotated in place of S/N 141.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure X
Other Pressure 1030 psi Test Temp 198 °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 141 was removed and pilot valve S/N 176 was installed. Prior to installation S/N 176 was repaired and documented on NIS-2 (17-00-03). A Inservice VT-1 (I01207) was completed on the bolting prior to installation and found acceptable. A VT-2 (I01092) 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] GL Equipment Monitoring Date May 25 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-7-00 to 5-25-01, 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.

William Mulla Commissions NB 7542 N, I I=1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 25, 2001

FORM NIS-2 (Back)

9. Remarks: Pilot Valve S/N 203 was removed and pilot valve S/N 227 was installed. Prior to installation S/N 227 was repaired and documented on NIS-2 (17-00-03). A VT-2 (I01092) 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] GL Equipment Monitoring Date May 25 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-7-00 to 5-25-01, 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.

William Mueller Commissions NB 7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date May 25, 2001

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 05/25/01
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 1113099
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) 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 199	N/A	PWO 1113099 / 83.04	1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (17-00-03). This Pilot Valve was rotated in place of S/N 202.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure 1030 psi Test Temp 198 °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 202 was removed and pilot valve S/N 199 was installed. Prior to installation S/N 199 was repaired and documented on NIS-2 (17-00-03). A VT-2 (I01092) 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
 conforms to the rules of the ASME Code, Section XI. (repair or replacement)

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed [Signature] GL Equipment Monitoring Date May 25 2001
 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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-7-00 to 5-25-01, 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.

William Meulle Commissions NB 7542 N, I Ia 1046
 Inspector's Signature National Board, State, Province, and Endorsements

Date May 25, 2001

FORM NIS-2 (Back)

9. Remarks: Check valve was modified with a redesigned hinge pin assembly. The new design hinge pin plug is intended to eliminate hinge pin plug gasket leaks. The modification was evaluated on EMA A48334A and the installation received an operating pressure system leak test (P99128).

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] GL Equipment Monitoring Date May 31 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 10-14-99 to 6-12-01, 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.

William Muller Commissions NB 7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date June 12, 2001

FORM NIS-2 (Back)

9. Remarks: HPCI Steam Supply Line Snubber EBB-014-SS-013 was replaced due to short service life. The replacement snubber is a second-generation hydraulic design that is expected to perform longer under vibration conditions. The replacement Lisega design was evaluated on EMA A50873. The installed snubber received a pre-service VT-3 examination (P01024).

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] GL Equipment Monitoring Date June 1, 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-29-01 to 6-12-01, 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.

William Mulla Commissions NB7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date June 12, 2001

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 06/01/01
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 1115084 & 1115086
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Drywell Electrical Penetration (JX105A & JX105C)
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	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)
Drywell Electrical Penetration (JX105A)	Conax	S/N: 6070	6070	MWO 1115084 / 59.00	2000	Replacement	Yes
Drywell Electrical Penetration (JX105C)	Conax	S/N: 6072	6072	MWO 1115086 / 59.00	2000	Replacement	Yes

7. Description of Work: Replaced electrical penetrations JX105A and JX105C.
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure 62.5 psi Test Temp 80 ° 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 electrical penetrations JX105A and JX105C. The replacement penetrations were built to ASME, Section III, Subsection MC, 1995 Edition, 1996 Addenda. This modification was evaluated on ECP 1630. Installation included pre-service VT-3 examinations (P01036 & P01038) and pre-service VT-2 pressure tests (P01037 & P01039)

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed [Signature] GL Equipment Monitoring Date June 8 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-27-01 to 6-13-01, 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.

William Mueller Commissions NB 7542 N, I I=1046
Inspector's Signature National Board, State, Province, and Endorsements

Date June 13, 2001

FORM NIS-2 (Back)

9. Remarks: HPCI Steam Supply Line Snubber EBB-014-SS-016 was replaced due to short service life. The replacement snubber is a second-generation hydraulic design that is expected to perform longer under vibration conditions. The replacement Lisega design was evaluated on EMA A50876. The installed snubber received a pre-service VT-3 examination (P01027).

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] GL Equipment Monitoring Date June 8 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-29-01 to 6-13-01, 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 NB7542 NI Ia1046
Inspector's Signature National Board, State, Province, and Endorsements

Date June 13, 2001

FORM NIS-2 (Back)

9. Remarks: HPCI Steam Supply Line Snubber EBB-014-SS-014 was replaced due to short service life. The replacement snubber is a second-generation hydraulic design that is expected to perform longer under vibration conditions. The replacement Ligsa design was evaluated on EMA A50874. The installed snubber received a pre-service VT-3 examination (PO1025).

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] GL Equipment Monitoring Date June 8 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-29-01 to 6-12-01, 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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William Mulla Commissions NB 7542 N, I I=1046
Inspector's Signature National Board, State, Province, and Endorsements

Date June 12, 2001

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 06/05/01
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 A50875
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None

4. Identification of System: HPCI Steam Supply Line Snubber EBB-014-SS-015 (Class 2)
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

Name of Component	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)
Hydraulic Snubber	Lisega	00614833 003	N/A	A50875 / 52.00	2000	Replacement	No

7. Description of Work: Replaced a Bergen Paterson snubber with a Lisega snubber.

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: HPCI Steam Supply Line Snubber EBB-014-SS-015 was replaced due to short service life. The replacement snubber is a second-generation hydraulic design that is expected to perform longer under vibration conditions. The replacement Liseza design was evaluated on EMA A50875. The installed snubber received a pre-service VT-3 examination (P01026).

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] GL Equipment Monitoring Date June 8 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-29-01 to 6-13-01, 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 NB7542 N, I Ia 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date June 13, 2001

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 06/07/01
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 1115104
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: MSR 1E-18A 2nd Stage Reheat Supply Valve MO1055 (Class 2)
5. (a) Applicable Construction Code ANSI B31.1 19 67 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 / SUS	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
M01055	Flowserve	E242T-1-1	N/A	1115104 / 83.02	2001	Replacement	No
6" Sch 80 Pipe	Consolidated Power Supply	Heat # U40050	N/A	1115104 / 83.02	2001	Replacement	No

7. Description of Work: Replaced MSR 2nd Stage supply valve and replaced spectacle flanges with straight pipe.
8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
- Other Pressure 943 psi Test Temp 540 °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 RFO16 the MSR 2nd stage reheat was isolated by installation of spectacle flanges upstream of the supply valve (MO1055) (NIS-2, 16-99-40). During RFO17 the second stage reheat was put back in service by replacing the spectacle flanges with a straight length of pipe and installation of a new supply valve (MO1055). All installation welds were subjected to volumetric NDE.

Code Case N416-1 was utilized for pressure test requirements of installation welds. System operating pressure test was performed during STP 830003.

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] GL Equipment Monitoring Date June 8 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-14-01 to 6-12-01, 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.

William Mulla Commissions NB7542 N, I Ia1046
Inspector's Signature National Board, State, Province, and Endorsements

Date June 12, 2001

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 06/07/01
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 1115105
Address Repair Organization to P. O. No., Job No., etc.

3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None

4. Identification of System: MSR 1E-18B 2nd Stage Reheat Supply Valve MO1054 (Class 2)

5. (a) Applicable Construction Code ANSI B31.1 19 67 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 / SUS	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
M01054	Flowserve	E242T-1-2	N/A	1115105 / 83.02	2001	Replacement	No
6" Sch 80 Pipe	Consolidated Power Supply	Heat # U40050	N/A	1115105 / 83.02	2001	Replacement	No

7. Description of Work: Replaced MSR 2nd Stage supply valve and replaced spectacle flanges with straight pipe.

8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure
Other Pressure 943 psi Test Temp 540 °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 RFO16 the MSR 2nd stage reheat was isolated by installation of spectacle flanges upstream of the supply valve (MO1054) (NIS-2, 16-99-40). During RFO17 the second stage reheat was put back in service by replacing the spectacle flanges with a straight length of pipe and installation of a new supply valve (MO1054). All installation welds were subjected to volumetric NDE.

Code Case N416-1 was utilized for pressure test requirements of installation welds. System operating pressure test was performed during STP 830003.

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed [Signature] GL Equipment Monitoring Date June 8 2001
 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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-14-01 to 6-12-01, 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.

William Mulla Commissions NB 7542 N, I I= 1046
 Inspector's Signature National Board, State, Province, and Endorsements

Date June 12, 2001

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 06/06/01
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 A50877
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Alliant Energy (IES Utilities) Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: HPCI Steam Supply Line Snubber EBB-014-SS-016A (Class 2)
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

Name of Component	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)
Hydraulic Snubber	Lisega	00614833 005	N/A	A50877 / 52.00	2000	Replacement	No

7. Description of Work: Replaced a Bergen Paterson snubber with a Lisega snubber.
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: HPCI Steam Supply Line Snubber EBB-014-SS-016A was replaced due to short service life. The replacement snubber is a second-generation hydraulic design that is expected to perform longer under vibration conditions. The replacement Liseqa design was evaluated on EMA A50877. The installed snubber received a pre-service VT-3 examination (PC1028).

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed [Signature] GL Equipment Monitoring Date June 8 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-29-01 to 6-13-01, 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.

William Mulla Commissions NB 7542 N, I Io 1046
Inspector's Signature National Board, State, Province, and Endorsements

Date June 13, 2001

FORM NIS-2 (Back)

9. Remarks: This 1" manual main steam drain valve developed a body-to-bonnet gasket leak. The valve was seal welded while in operation. Seal welding included attaching two 1/2" pipe nipples with threaded caps to allow a leakage flow path during welding. All welding was performed using procedures and welders qualified to ASME, Section IX. This repair did not alter the integrity of the original pressure boundary, but merely extended gasket seal area to the seal weld. A VT-2 pressure test was not required per ASME Section XI Pressure Testing Administrative Document, 5.1.10.a(8).

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 [Signature] GL Equipment Monitoring Date June 8 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 5-25-01 to 6-12-01, 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 7542 N, I I=1046
Inspector's Signature National Board, State, Province, and Endorsements

Date June 12, 2001

FORM NIS-2 (Back)

9. Remarks: The edges of the disc guide slots were chamfered at a 45° angle to help prevent binding. Approximately 1/8" of material was removed during the machining process. The finished machined surfaces were PT examined.

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 [Signature] GL Equipment Monitoring Date June 12 2001
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 Hartford Steam Boiler I & I Co. of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-27-01 to 6-12-01, 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.

William Mueller Commissions NB7542 N, I I-1046
Inspector's Signature National Board, State, Province, and Endorsements

Date June 12, 2001

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part H, page 1 of 1

- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 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 December 01,1999 through May 27, 2001.

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part I, page 1 of 48

- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 MWE | |

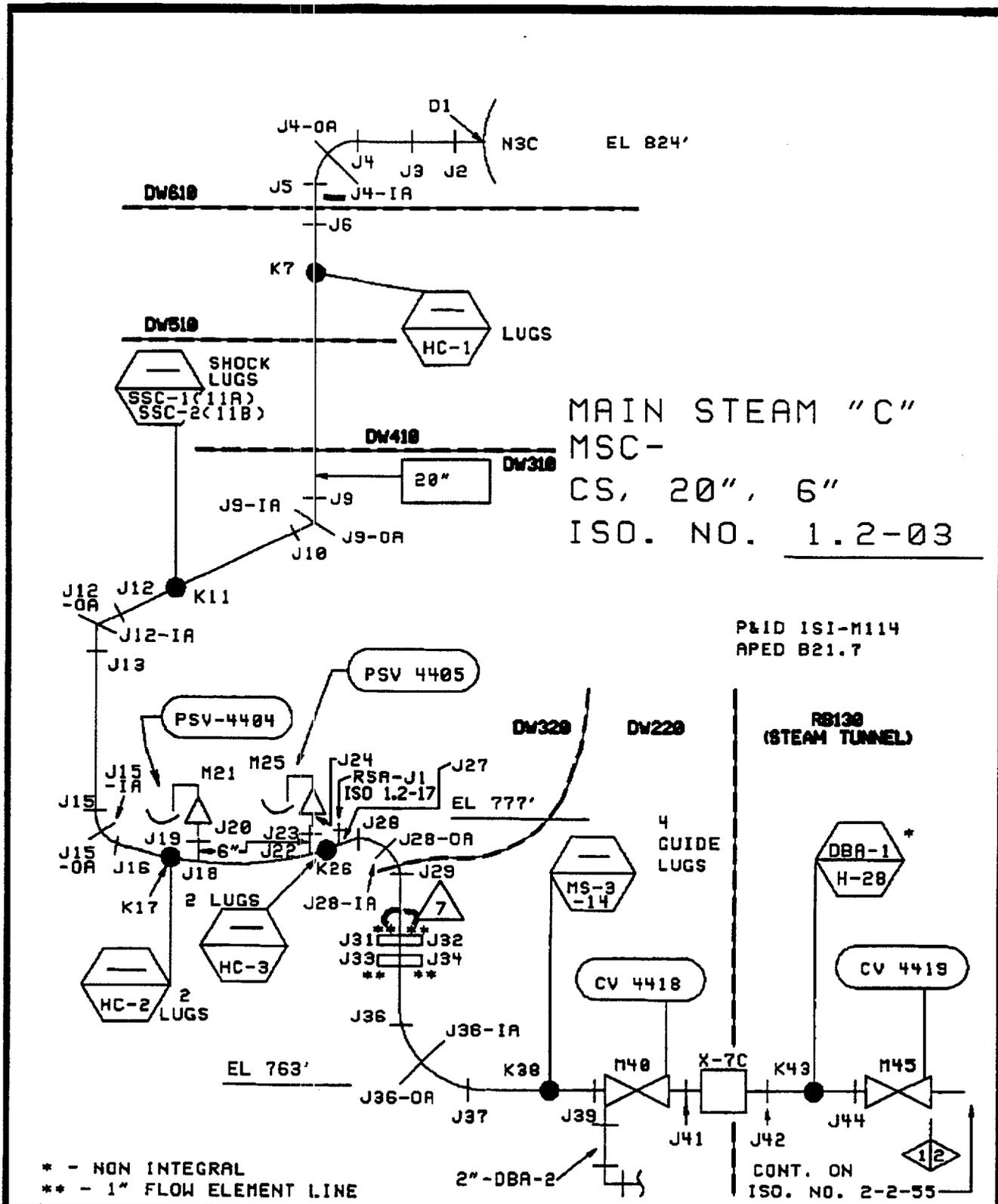
ISI FIGURES AND ISOMETRICS

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

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

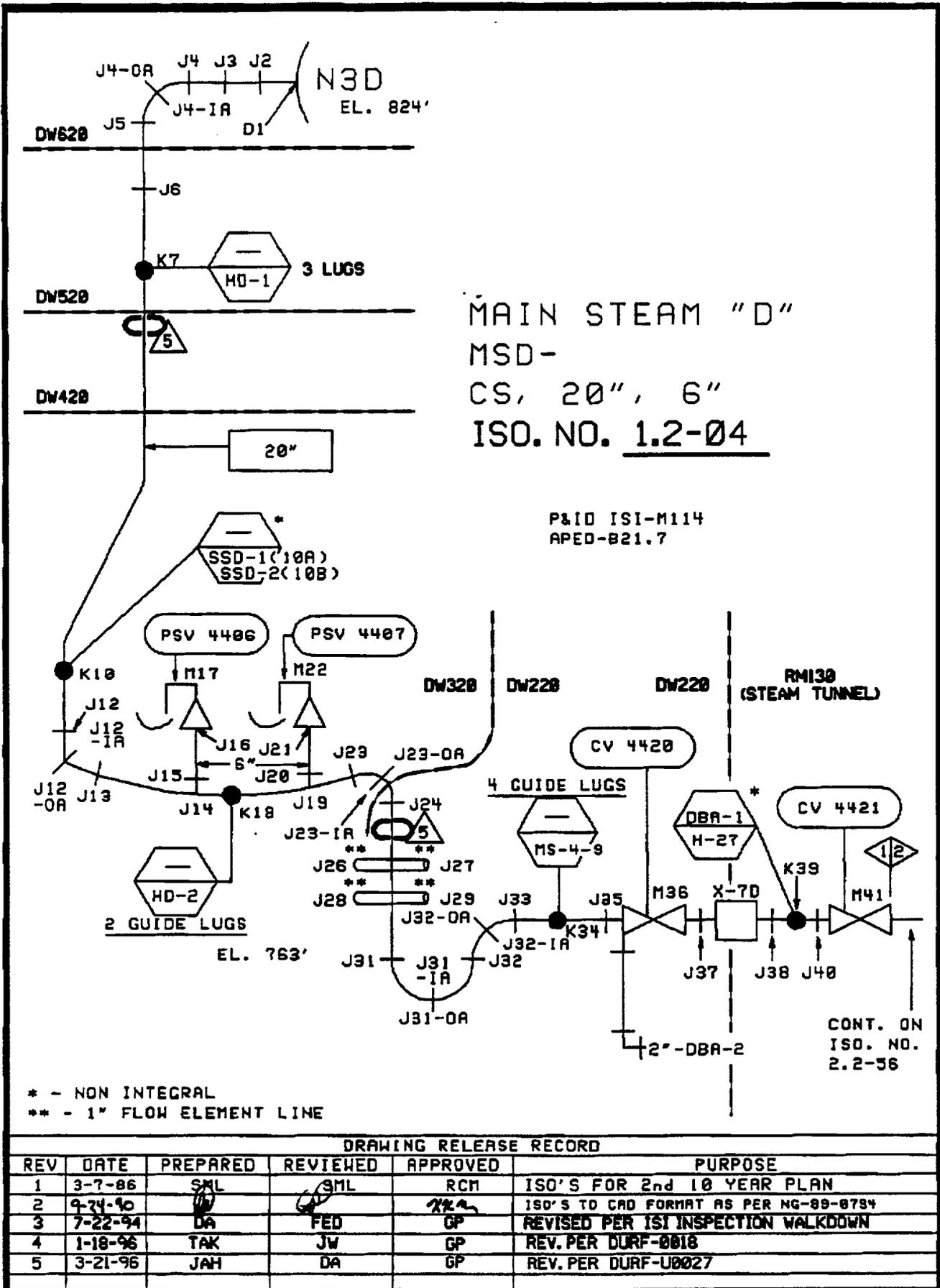
Part I, page 2 of 48

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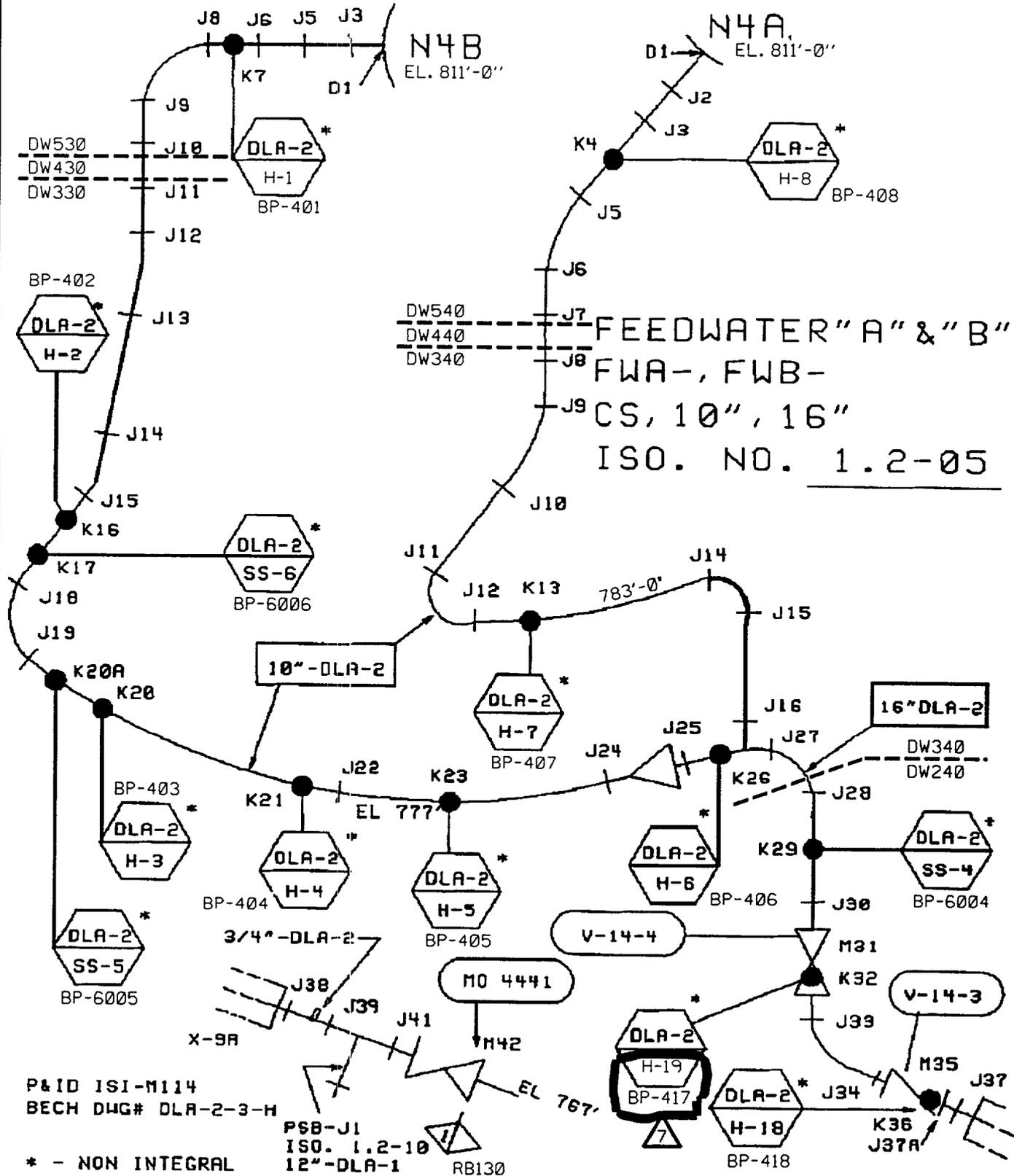
DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	3-21-96	JAH	DA	GP	REV. PER DURF-U0027
2	9-24-98	DA	GP	KKM	ISO'S TO CAD FORMAT AS PER NG-89-0794
3	10-3-91	DA	GP	KKM	REMOVED EXTRA WELD NUMBER
4	4-2-95	DA	GP	GP	CHANGED ISO #
5	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
6	1-24-96	TAK	JW	GP	REV. PER DURF-0018



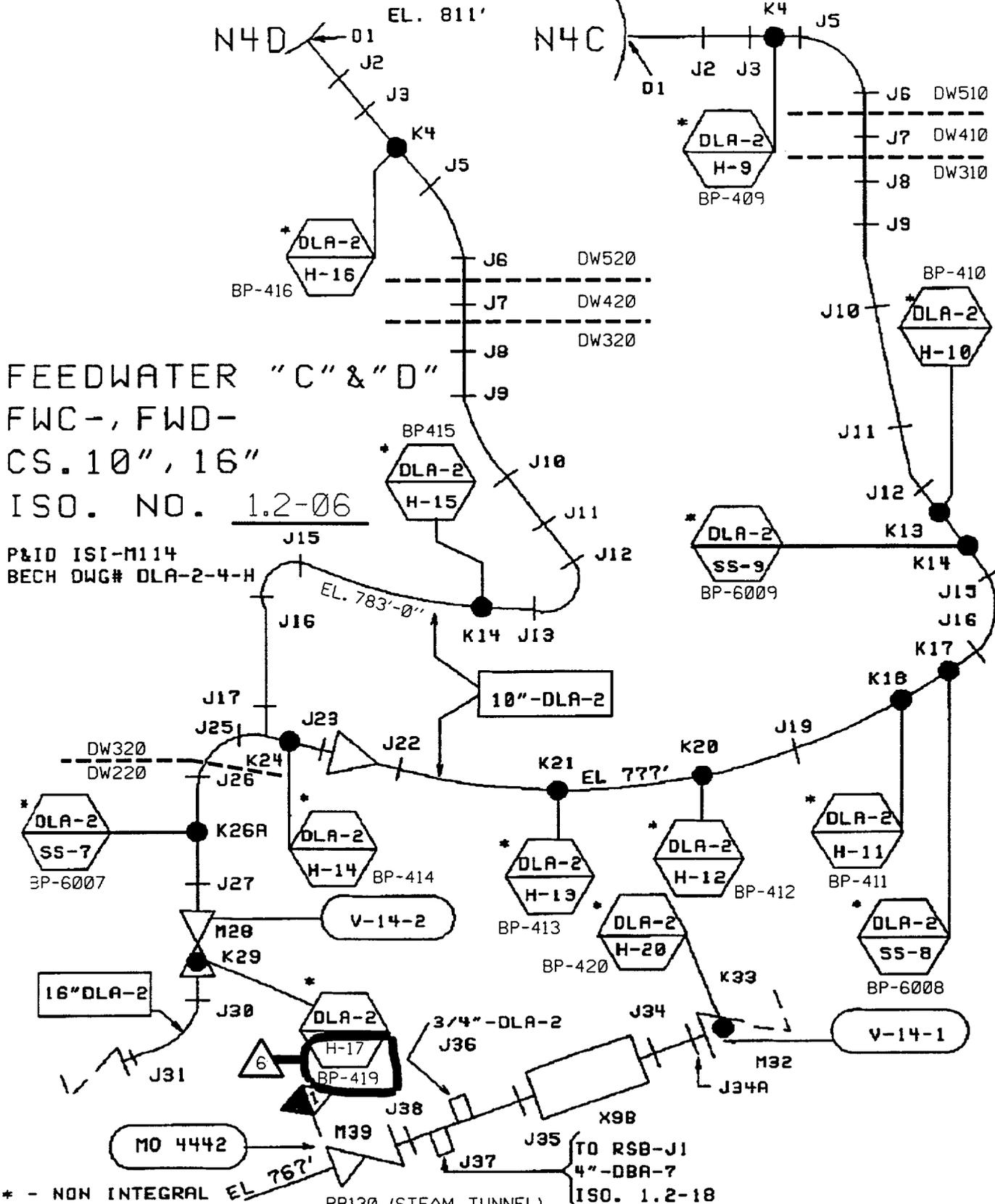
DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-7-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	FED	GP	ISO'S TO CAD FORMAT AS PER NG-89-8734
3	7-22-94	TAK	JW	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1-18-96	JAH	DA	GP	REV. PER DURF-0018
5	3-21-96				REV. PER DURF-U0027



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 HG-89-8794
3	11-18-92	DA	GP	GP	REVISED PER DDC-2841
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



FEEDWATER "C" & "D"
 FWC-, FWD-
 CS. 10", 16"
 ISO. NO. 1.2-06

P&ID ISI-M114
 BECH DWG# DLA-2-4-H

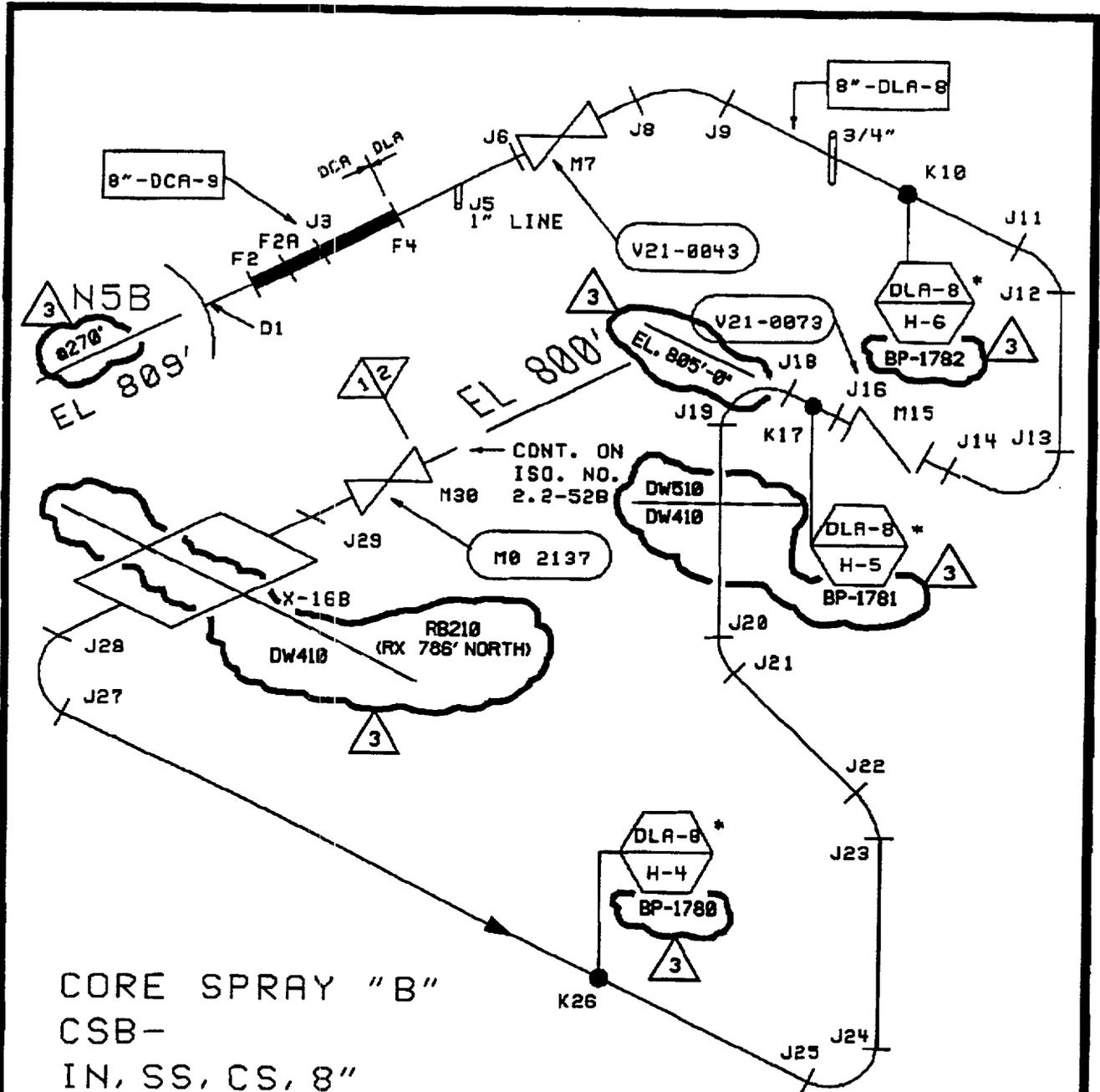
* - NON INTEGRAL

RB130 (STEAM TUNNEL)

TO RSB-J1
 4"-DBA-7
 ISO. 1.2-18

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-11-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DB	GP	KKM	ISO'S TO CAD FORMAT AS PER NG-89-0794
3	11-18-92	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	REVISED PER DDC-2041
4	7-22-94	DA	BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
5	3/26/98	DA	TAK	GP	REVISED PER DURF-U0046
6	6/4/99	DA	GP	FED	REVISED PER DURF-U0111



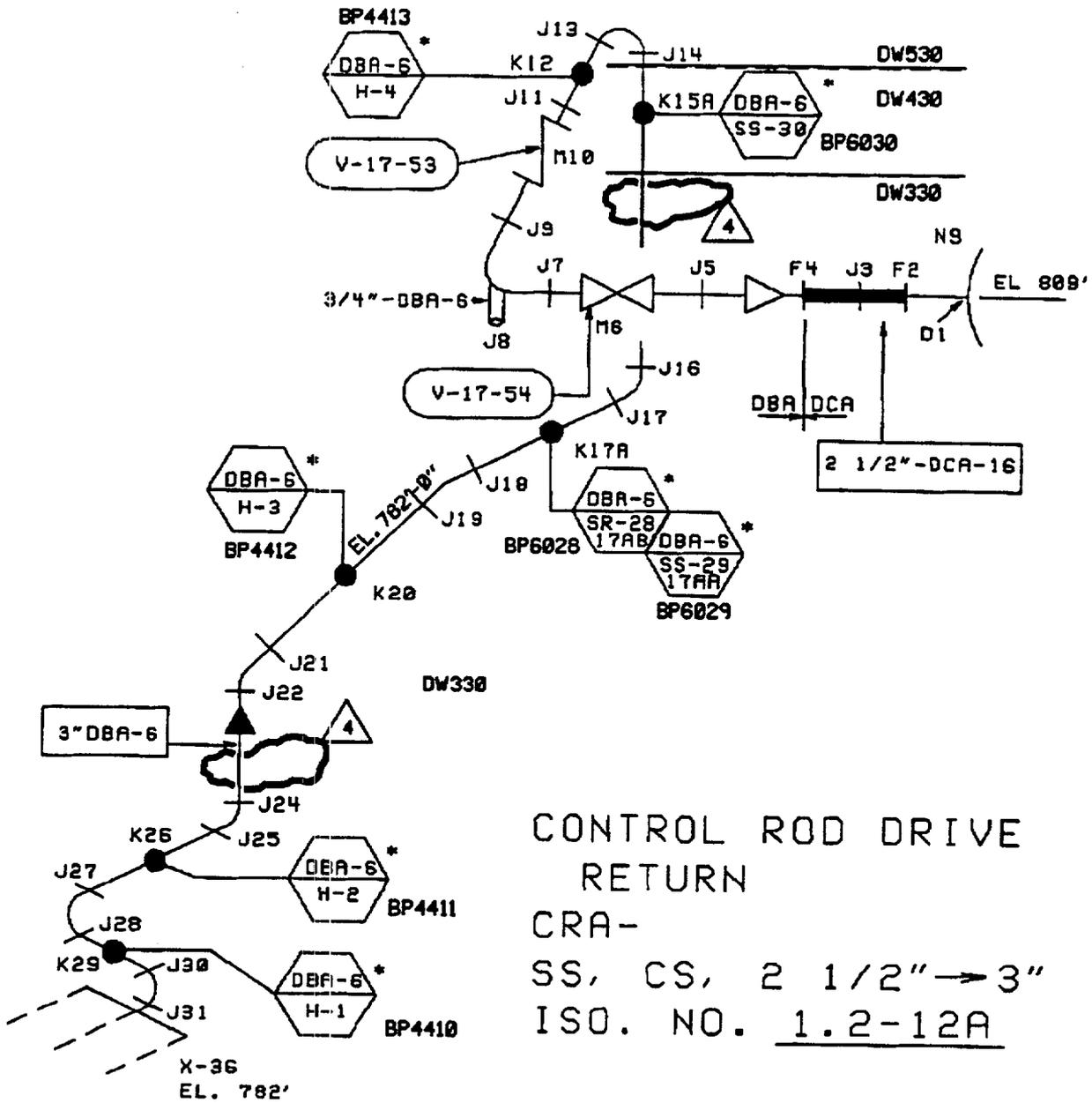
CORE SPRAY "B"
 CSB-
 IN. SS, CS, 8"
 ISO. NO. 1.2-08

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

* - NON INTEGRAL

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-12-86	SNL	SNL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	4-24-90	DA	JAH	GP	ISO'S TO CAD FORMAT AS PER NC-89-0734
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN



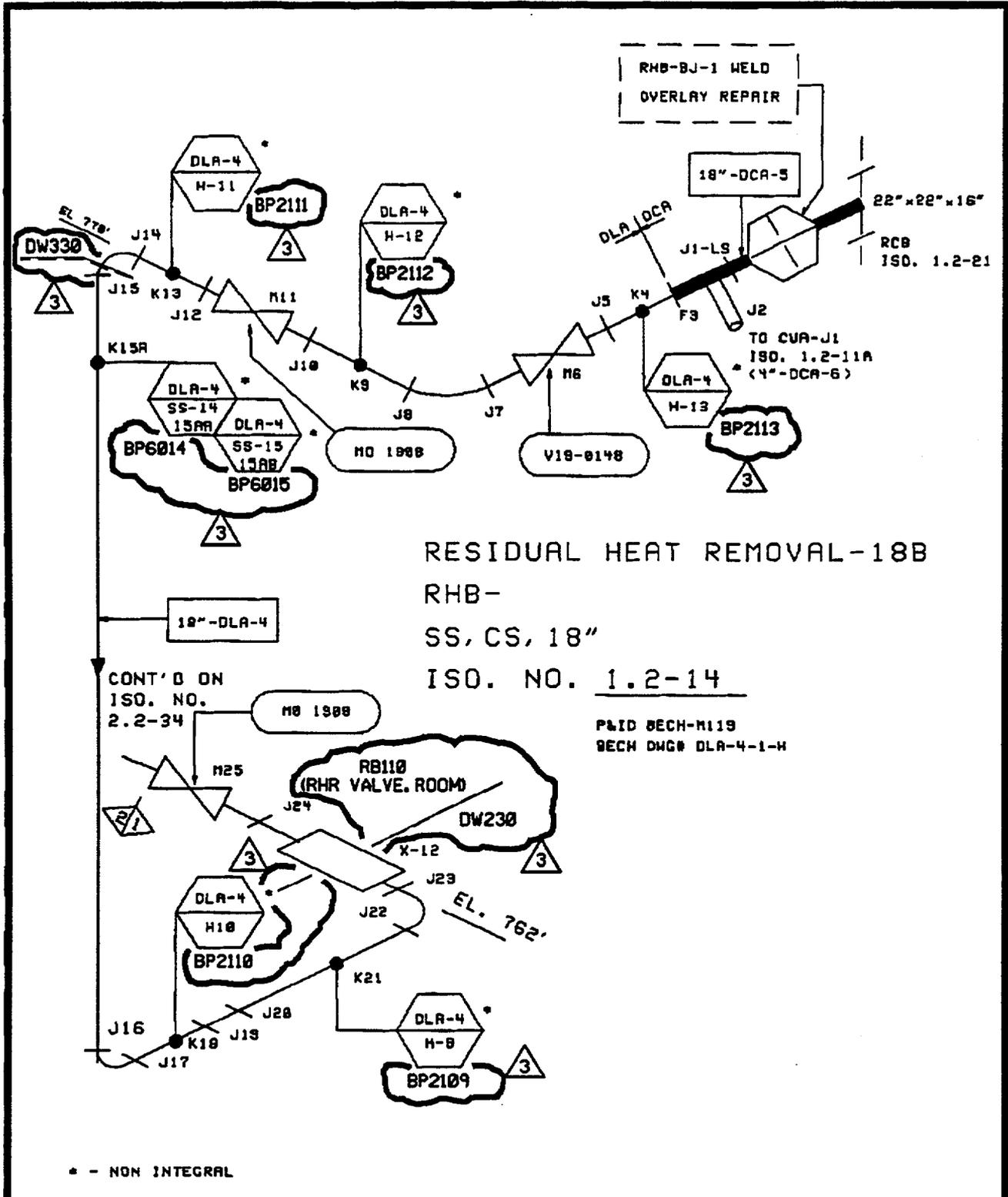
CONTROL ROD DRIVE
 RETURN
 CRA-
 SS, CS, 2 1/2" → 3"
 ISO. NO. 1.2-12A

CONT. ON
 ISO. NO. 1.2-12B

P&IS ISI-M117
 BECH. DWG# DBA-6-1-H

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-13-86	SML	SML	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	1-24-90	DA	JNH / FED	GP	ISO'S TO CAD FORMAT AS PER NG-89-070*
3	7-22-94	DA	JDF	GP	REVISED PER ISI INSPECTION WALKDOWN
4	7-6-95	DA	JDF	GP	REVISED PER DURF-0013



RESIDUAL HEAT REMOVAL-18B
 RHB-
 SS, CS, 18"
 ISO. NO. 1.2-14

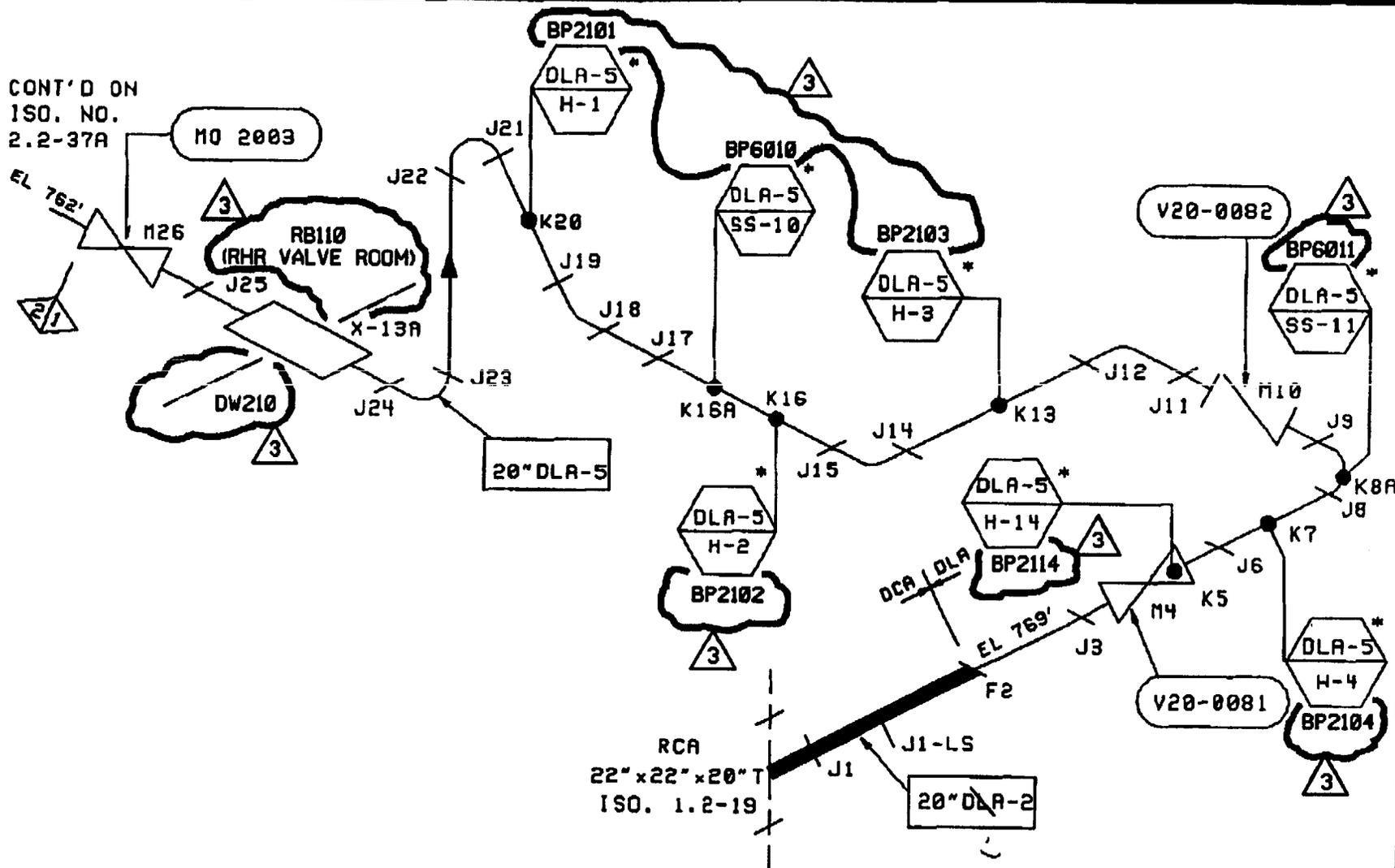
P&ID BECH-M119
 BECH DWG# DLA-4-1-H

* - NON INTEGRAL

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-17-88	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	JAH / FED	GP	ISO'S TO CAD FORMAT AS PER HG-83-0794
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN

CONT'D ON
ISO. NO.
2.2-37A



RESIDUAL HEAT REMOVAL-20A
RHC-
SS, CS, 20"
ISO. NO. 1.2-15

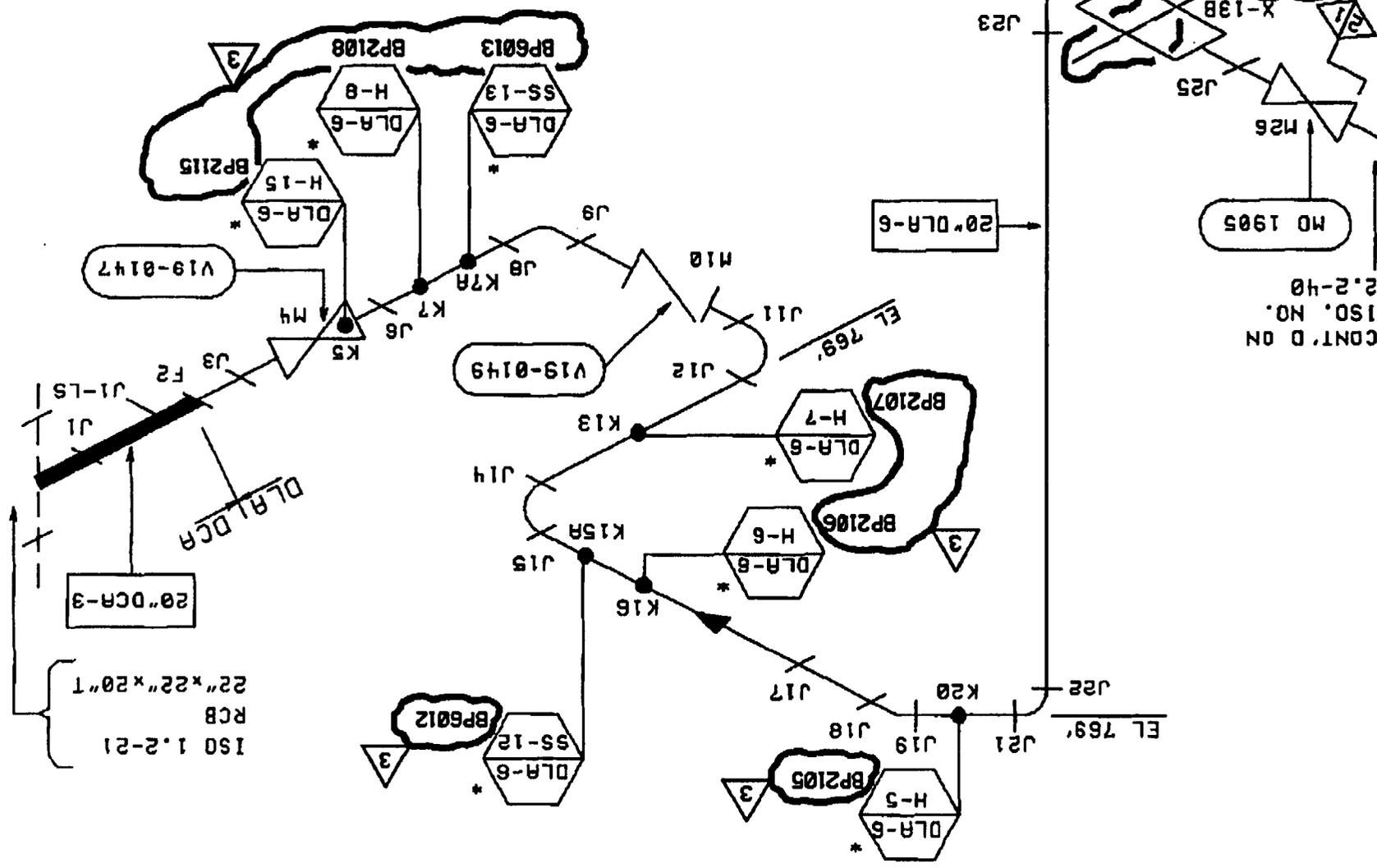
P&ID BECH-M120
BECH DWG# DLA-5-1-H

* - NON INTEGRAL

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-17-86	SHL	SHL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	4-24-90	DA	GP	GP	ISO'S TO CAD FORMAT AS PER NC-89-0794
3	7-22-94	DA	GP	GP	REVISED PER ISI INSPECTION WALKDOWN

DRAWING RELEASE RECORD

RESIDUAL HEAT REMOVAL-20B
 RHD-
 SS, CS, 20"
 ISO. NO. 1.2-16

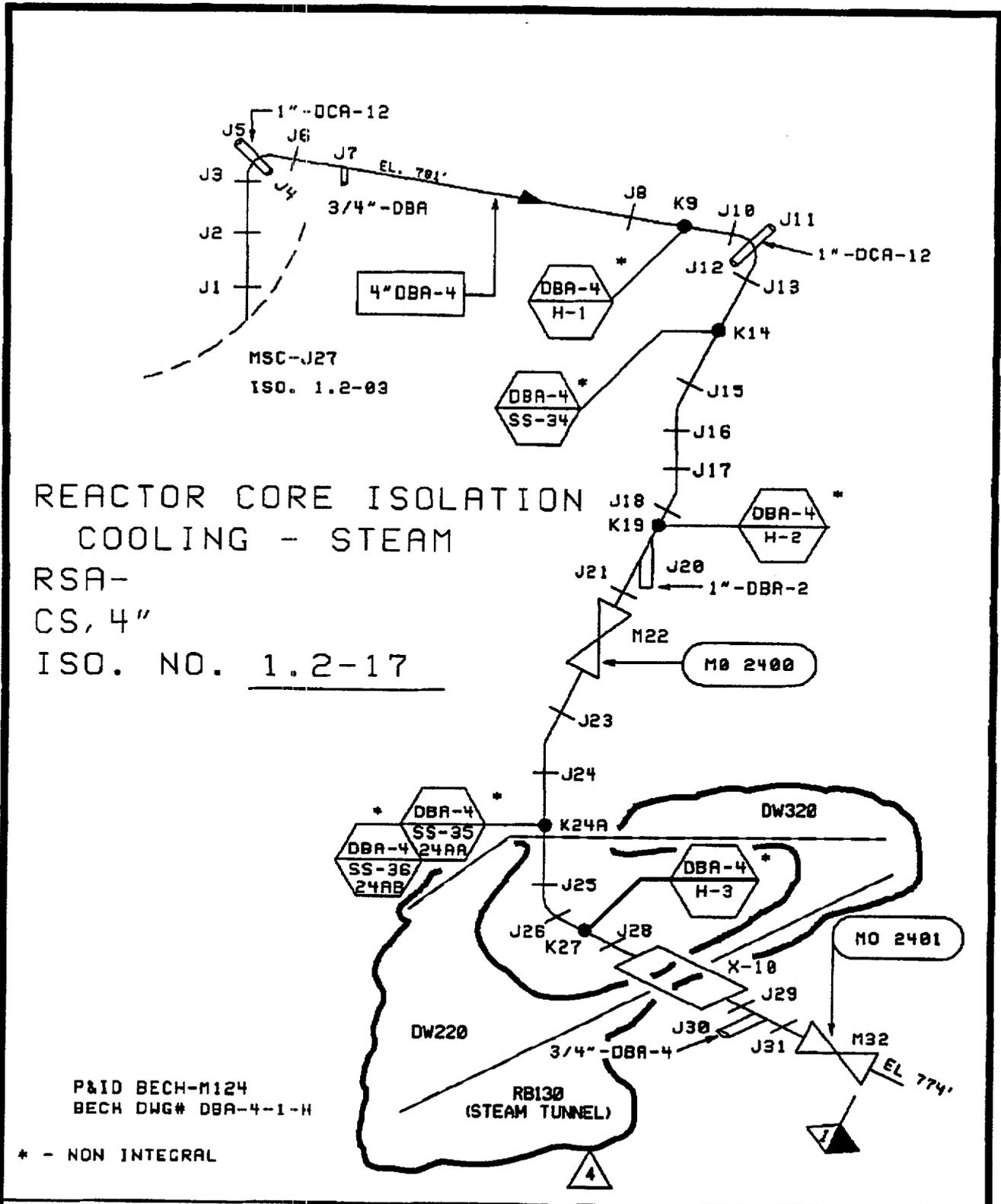


* - NON INTEGRAL
 PAID BECH-M119
 BECH DMC# DLR-6-1-H

CONT'D ON
 ISO. NO. 2.2-40
 MD 1905

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-18-86	SAL	SML	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	JAH	GP	ISO'S TO CAD FORMAT AS PER MC-69-8794
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN



REACTOR CORE ISOLATION
 COOLING - STEAM
 RSA-
 CS, 4"
 ISO. NO. 1.2-17

P&ID BECH-M124
 BECH DWG# DBA-4-1-H

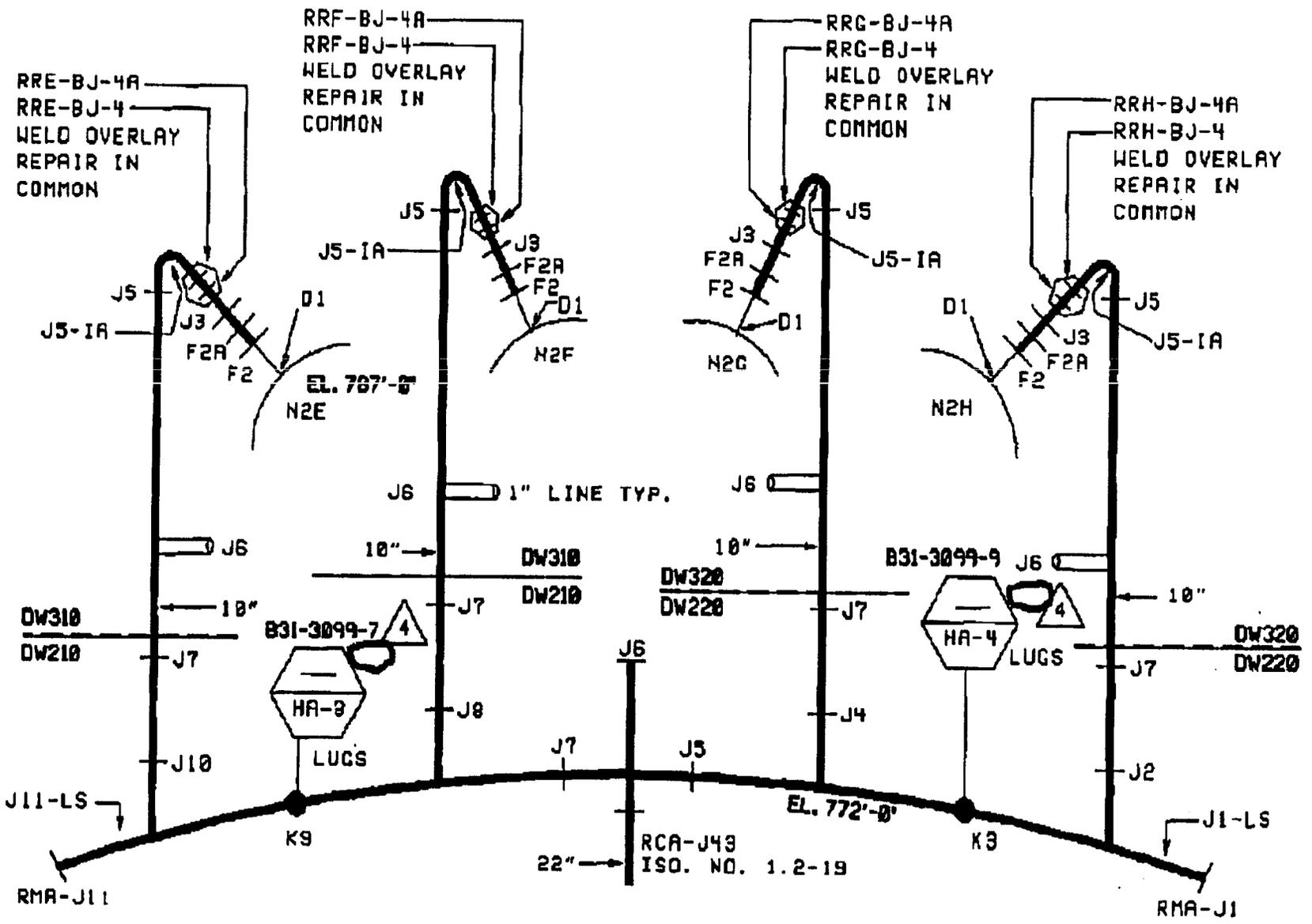
* - NON INTEGRAL

DRAWING RELEASE RECORD					
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-18-86	SML	SML	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-98	DA	GP	KKM	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	4-2-99	DA	GP	GP	REVISED ISO NO.
4	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN

REPT. RECEIVED BY INSPECTOR'S OFFICE DEPARTMENT OF TRANSPORTATION

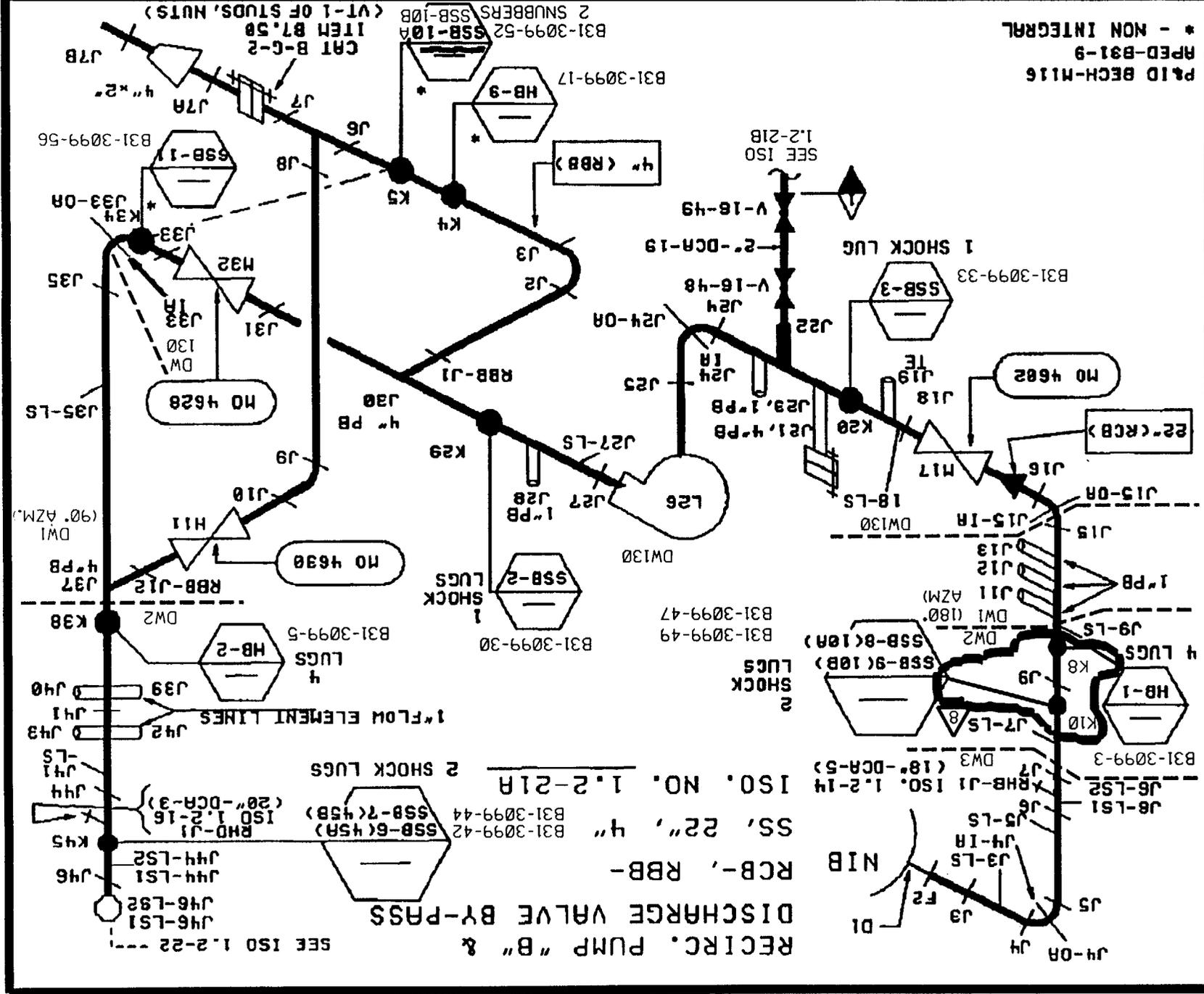
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-28-86	SNL	GP	GP	ISO'S FOR 2nd 10 YEAR PLAN
2	4-24-90	DA	GP	GP	ISO'S TO CMO FORMAT AS PER NC-89-8794
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1-18-96	TAK	JW	GP	REV. PER DURF-0018

DRAWING RELEASE RECORD



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

▲ 4 P&ID BECH-M116
 APED-B31-9



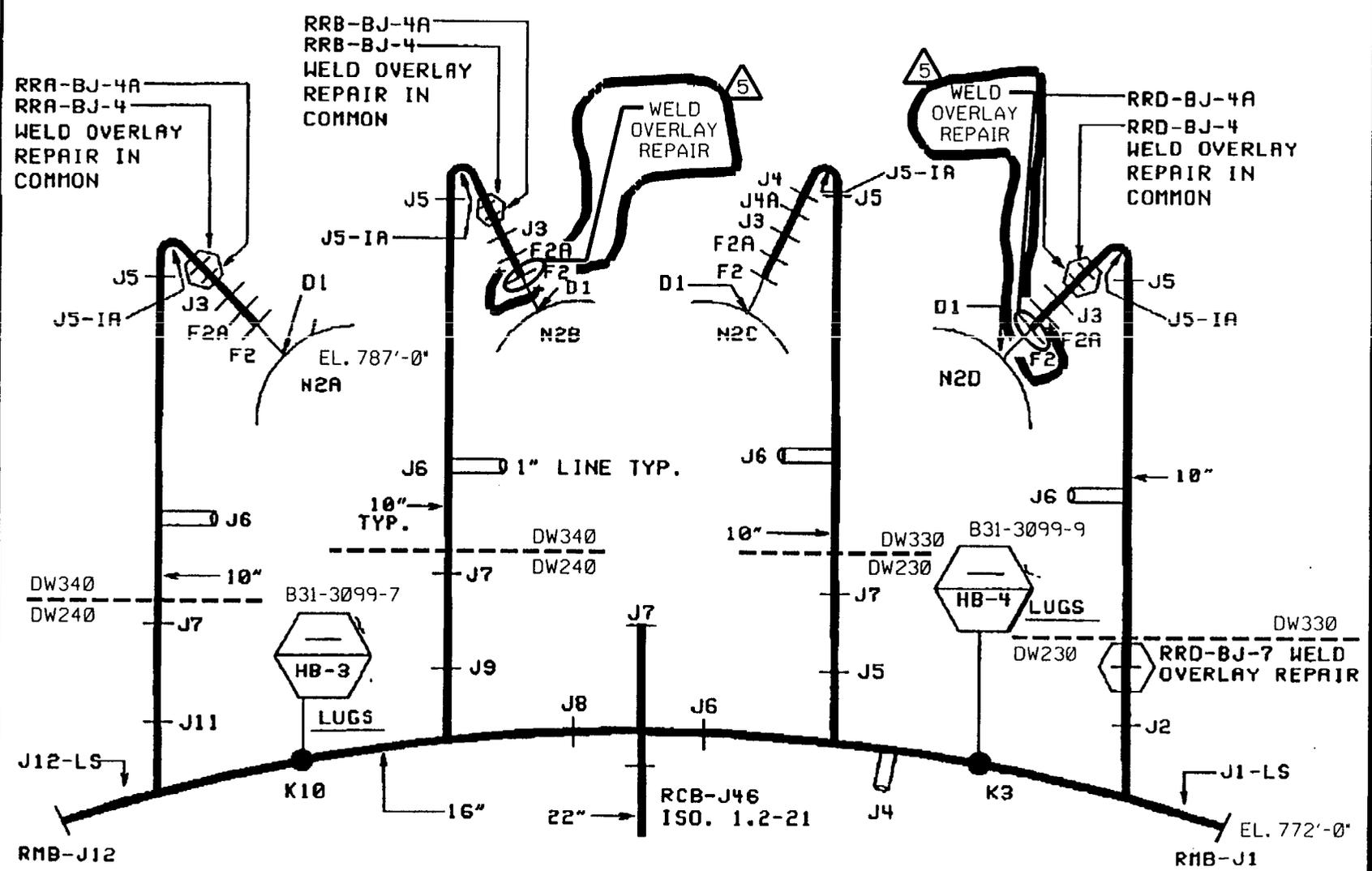
* - NON INTEGRAL
 APED-B31-9
 PAID BECH-M116

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	2-6-96	TAK	JW	GP	REV. PER DURF-0018
8	6/4/99	DA	GP	FED	REVISED PER DURF-U011
3	9-24-98	DA	GP	KKH	190'S TO CAO FORMAT AS PER NC-89-0794
4	10-3-91	DA	GP	KKH	ADDING MISSING IDENTIFICATION
5	4-2-93	DA	GP	KKH	ADDED FLANGE
6	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN

ORAC IN-SERVICE INSPECTION ASME SECTION XI ISOMETRIC

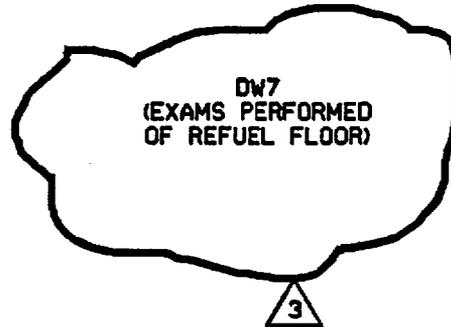
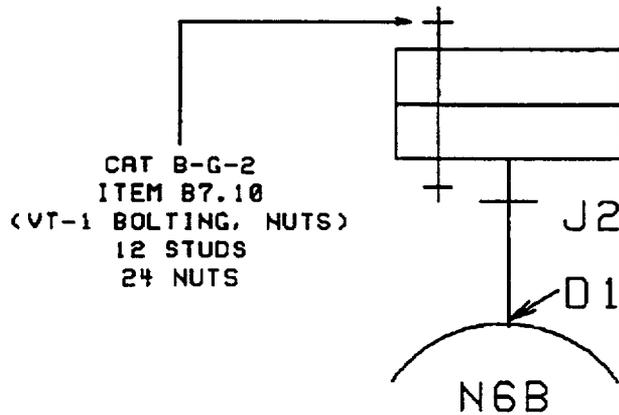
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-20-86	SAL	SAL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	9-21-90	JW	JW	GP	ISO'S TO CMD FORMAT AS PER NG-89-8794
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1/18/96	TAK	JW	GP	REV. PER DURF-0018
5	1/13/00	JW	TAK	GP	REV. PER DURF-0136

DRAWING RELEASE RECORD



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



HEAD SPARE

HSB-

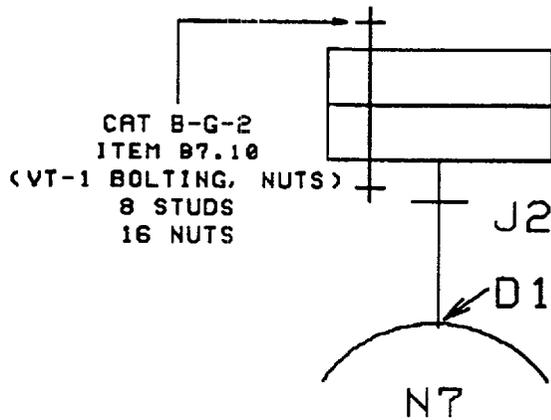
CS, 6"

ISO. NO. 1.2-23

P&ID BECH-M114
APEN-B11-2655-103-4

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-26-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	4-24-90	DA	JAH	RCM	ISO'S TO CAD FORMAT AS PER NG-89-8784
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN



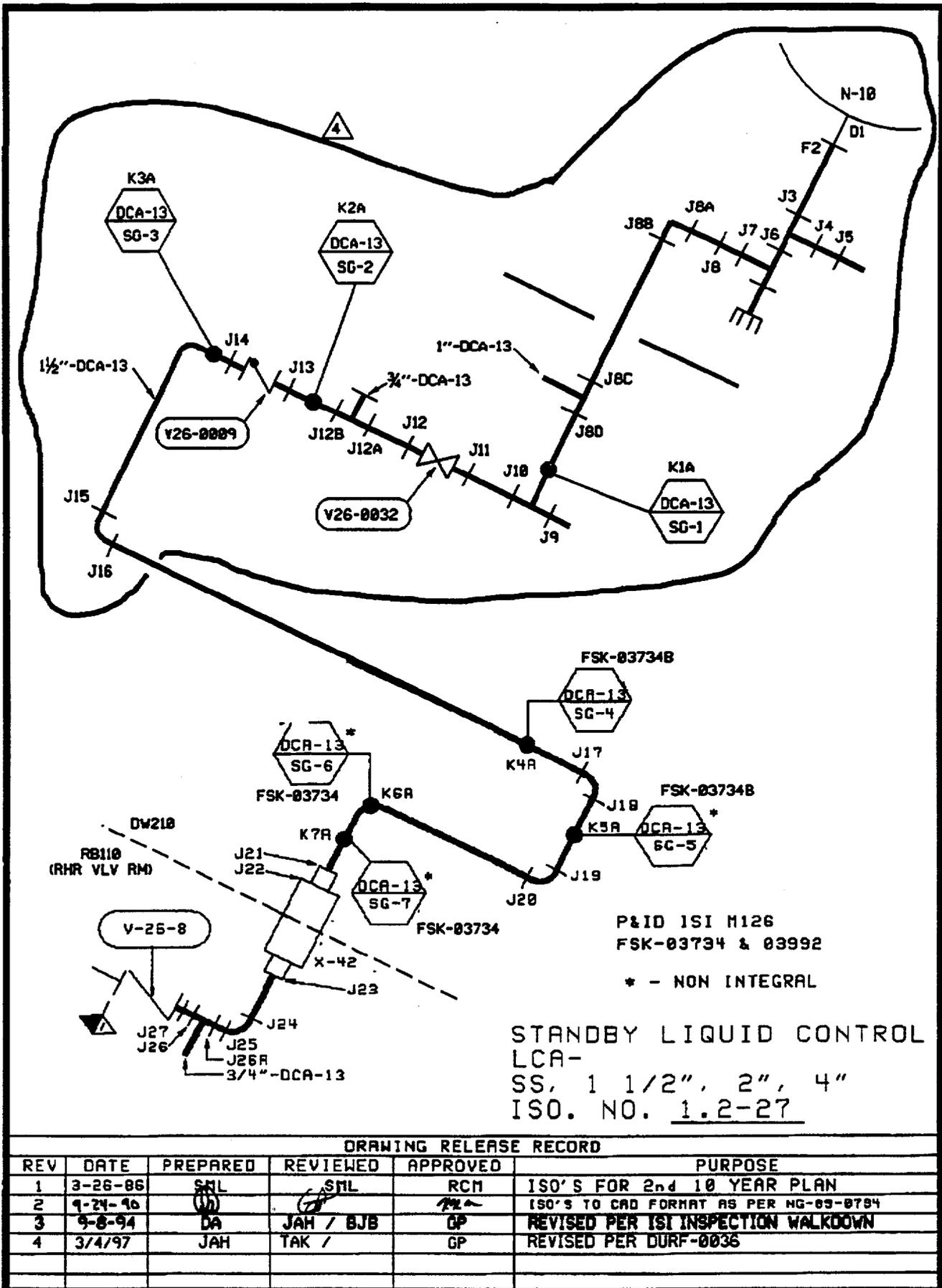
DW7
(EXAMS PERFORMED
ON REFUEL FLOOR)

3

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

P&ID BECH-M114
APED-B11-2655-104-3

DRAWING RELEASE RECORD					
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-26-86	SAL	SAL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	JAH	GP	ISO'S TO CAD FORMAT AS PER NG-89-0794
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN

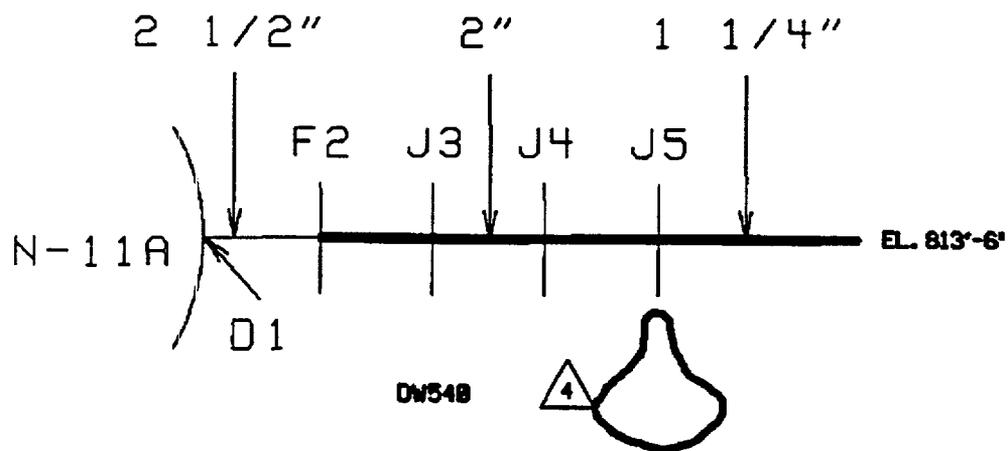


P&ID ISI M126
 FSK-03734 & 03992
 * - NON INTEGRAL

STANDBY LIQUID CONTROL
 LCA-
 SS, 1 1/2", 2", 4"
 ISO. NO. 1.2-27

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-26-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	SML	SML	RCM	ISO'S TO CAD FORMAT AS PER NG-89-0794
3	9-8-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
4	3/4/97	JAH	TAK /	GP	REVISED PER DURF-0036

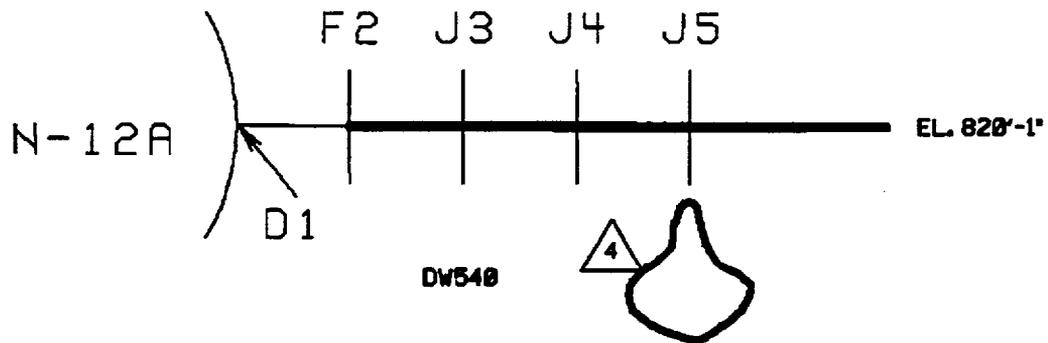


VESSEL INSTRUMENTATION N-11A
 VIA-
 SS, 1 1/4", 2", 2 1/2"
 ISO. NO. 1.2-28

P&ID BECH-M115
 FSK-5560

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-27-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	7-22-94	DA	JNH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1/18/96	TAK	JW	GP	REV. PER DURF-0018

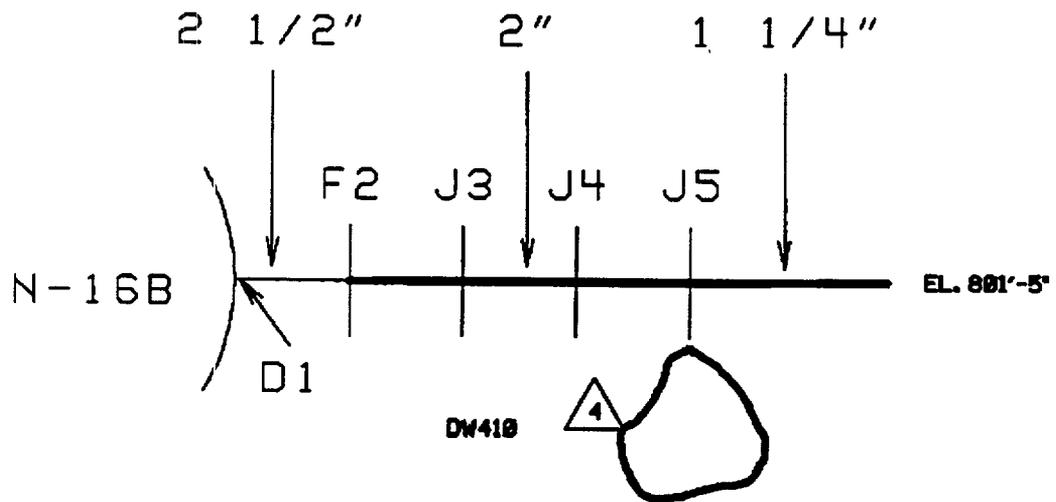


VESSEL INSTRUMENTATION N-12A
 VIC-
 SS, 2", 2 1/2"
 ISO. NO. 1.2-30

P&ID BECH-M115

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-27-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	7-24-90	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	ISO'S TO CAD FORMAT AS PER NG-89-0794
3	7-22-94	BA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1/18/96	TAK	JW	GP	REV. PER DURF-0018



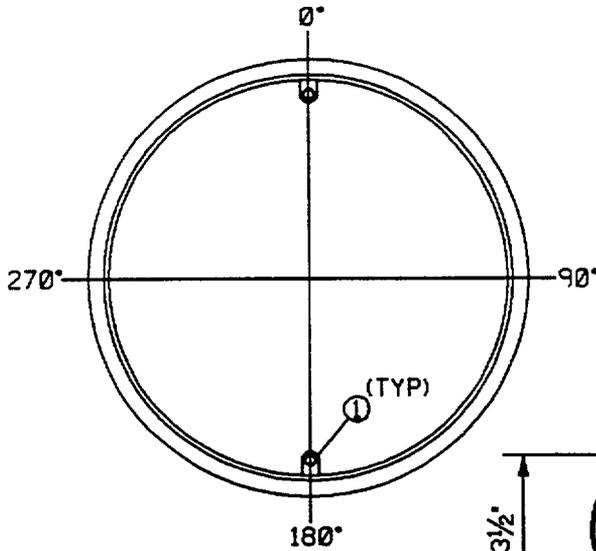
VESSEL INSTRUMENTATION N-16B
 VIF-
 SS, 1 1/4", 2", 2 1/2"
 ISO. NO. 1.2-34

P&ID BECH-M115
 FSK-5556

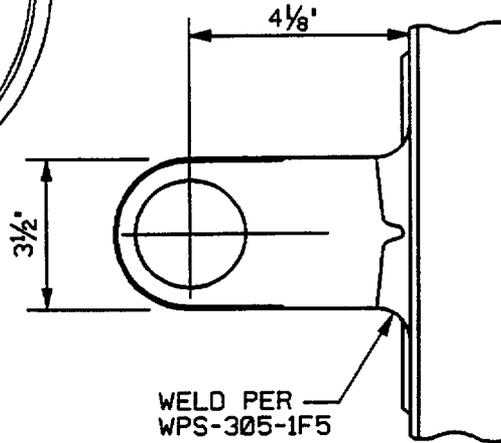
DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-28-86	SRL	SRL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	<i>(Signature)</i>	<i>(Signature)</i>	<i>(Signature)</i>	ISO'S TO CAD FORMAT AS PER NG-89-8784
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1/18/96	TAK	JW	GP	REV. PER DURF-0018

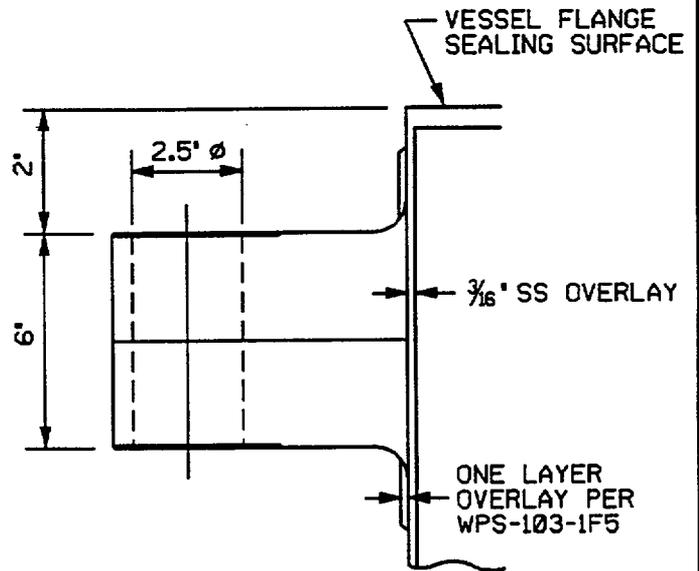
NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	GUIDE ROD BRACKET	304L SA240	



PLAN VIEW



PLAN VIEW



ELEVATION

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

NO.	DATE	DESCRIPTION	MS	DF	GP	SS
1	12-08-94	DRAFTED FOR VESSEL INSPECTION PROGRAM				
		REVISION				

IES:
 Inservice Inspection Program
 Reactor Pressure Vessel Sketch

GUIDE ROD BRACKET

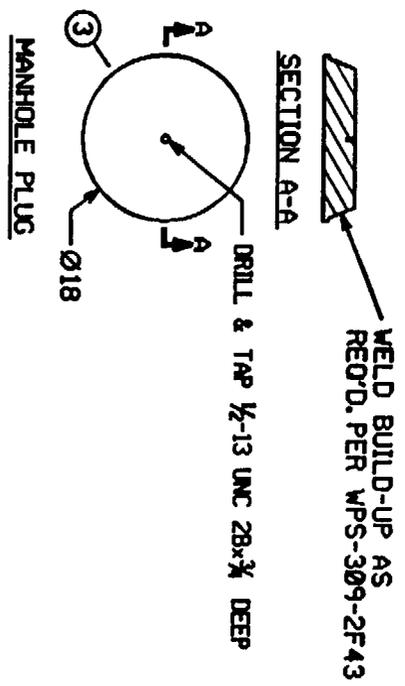
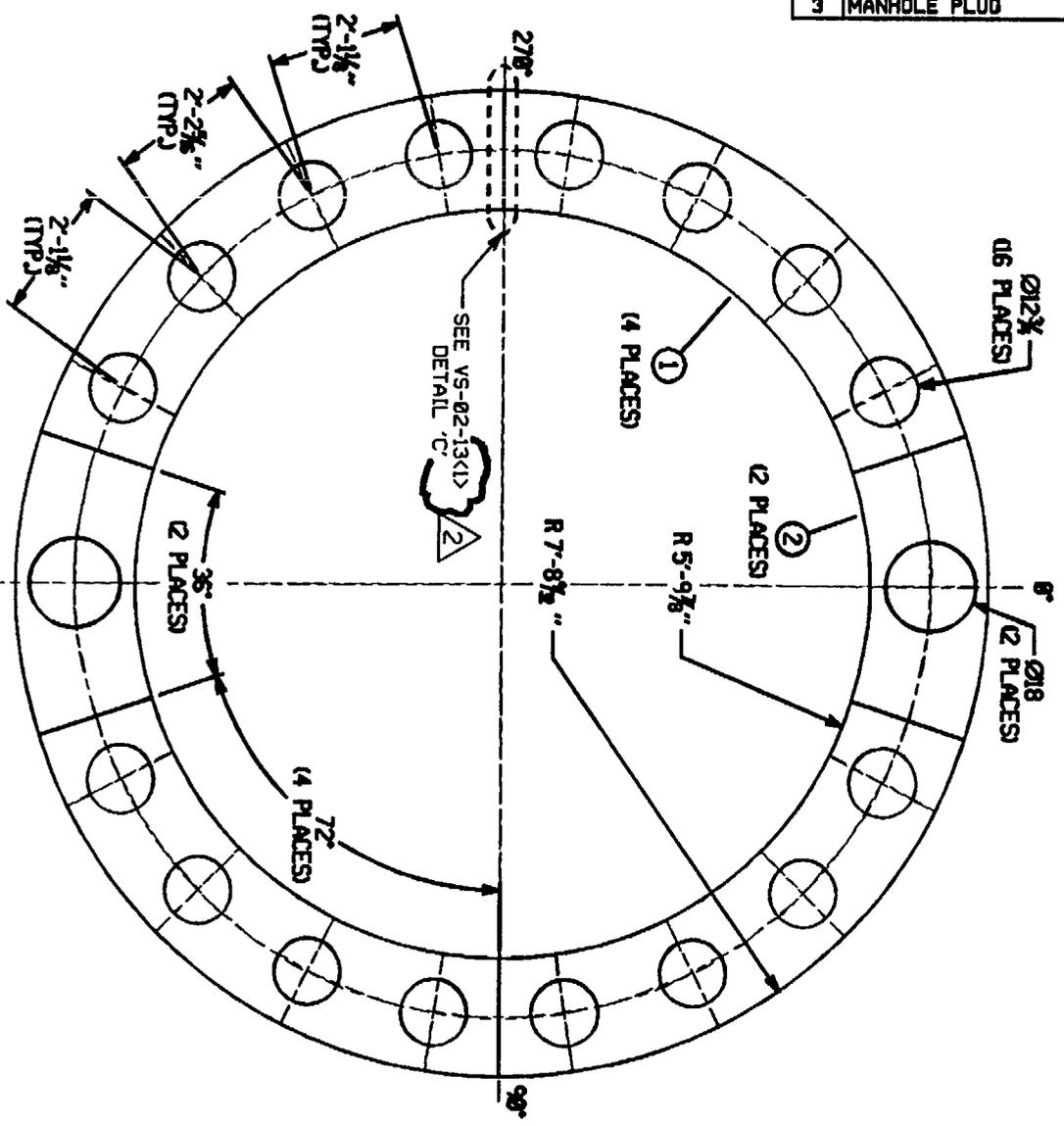
DWG. NO.

VS-01-28

REV.

1

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



NO.	DATE	REVISION	DRTR.	CHK'D.	ENGR.	VER.
2	8/8/95	REVISED PER DURF-0011	DA	GD	SS	SS
1	11-23-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP	SS

REFERENCE DRAWINGS:
 APED-B11-2655-283, APED-B11-2655-295,
 APED-B11-2655-265

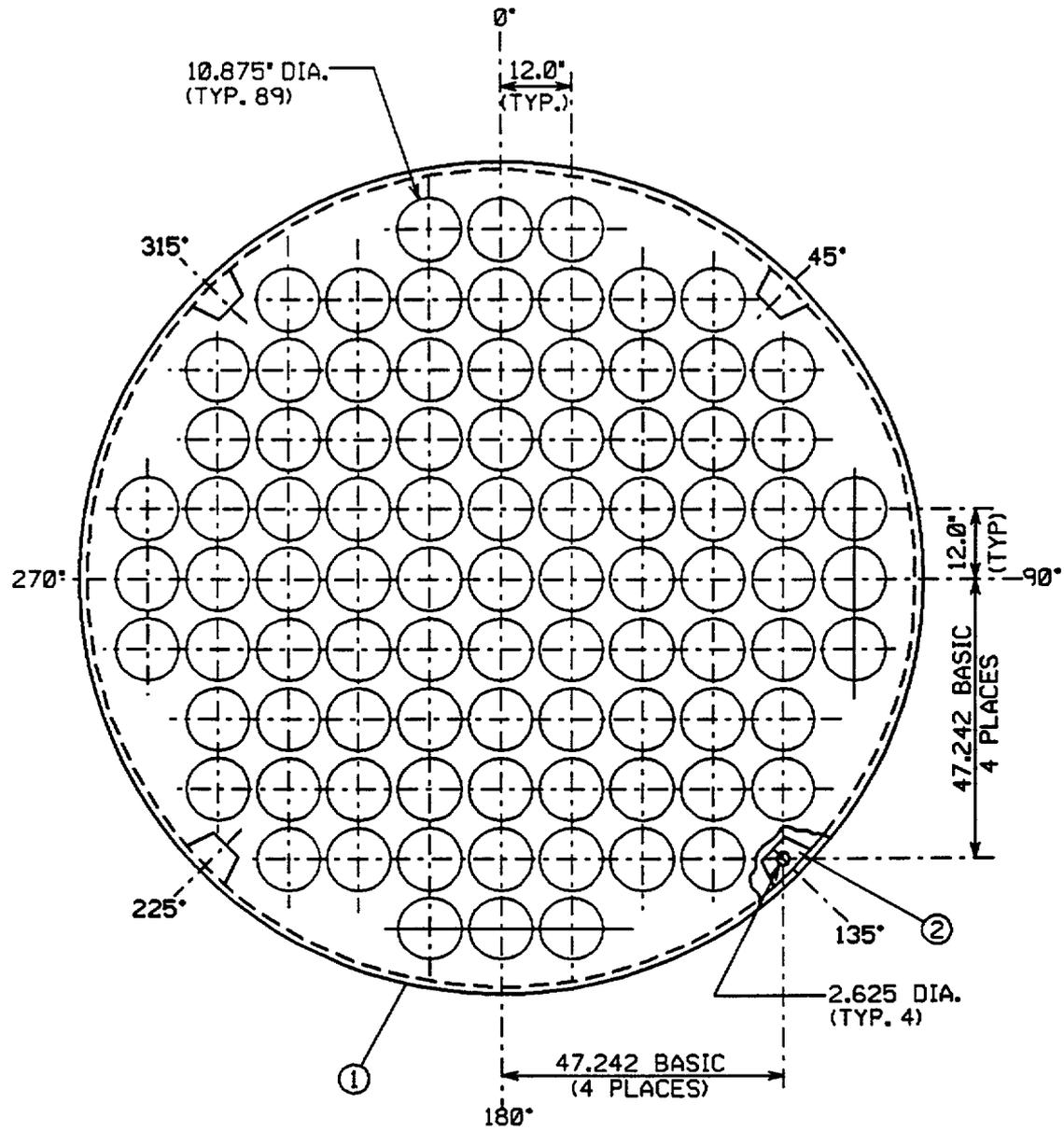
IES:
 Inservice Inspection Program
 Reactor Pressure Vessel Sketch

LEDGE SEGMENT
 PLATES

DWG. NO. VS-02-11 REV. 2

NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	CORE PLATE	304L A240	
2	ALIGNER BLOCKS	(SEE VS-03-06)	

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



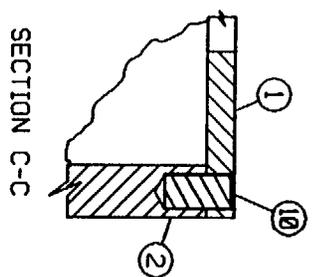
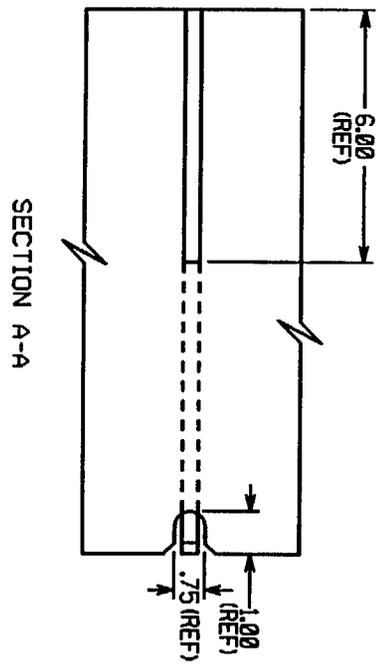
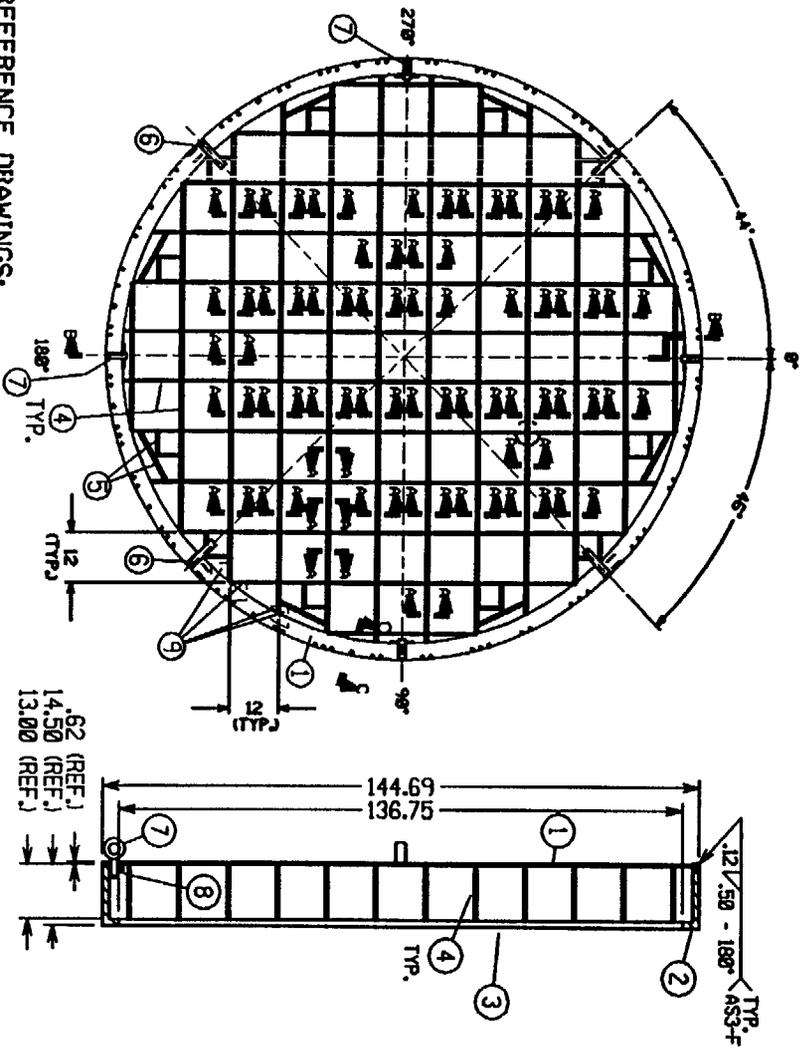
REFERENCE DRAWING:
 APED-B11-3084-008,
 APED-B11-3084-009

NO.	DATE	REVISION
1	12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM

IES:
 Inservice Inspection Program
 Reactor Pressure Vessel Sketch

DWG. NO.	VS-03-02<1>	REV.	1
CORE PLATE			

NO.	DESCRIPTION	BILL OF MATL.	PROCED.
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 (Ø.875" DIA.)	304 A276	

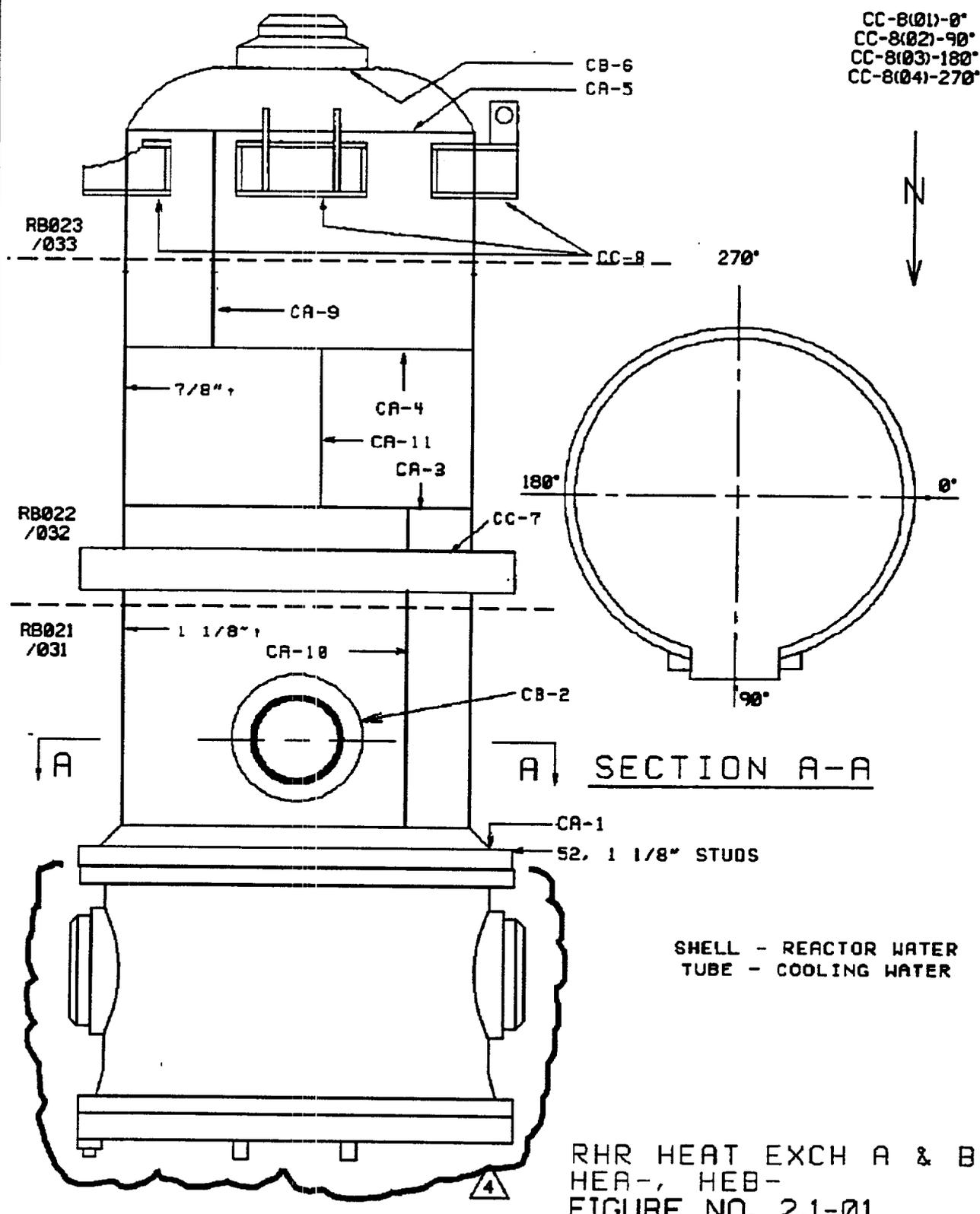


NO.	DATE	REVISION	MS	DF	GP	SS
1	12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	DRFTR.	CHK'D.	ENGR.	VER.

REFERENCE DRAWINGS:
 APED-811-3084-001,
 APED-811-3084-108

IES:
 Inservice Inspection Program
 Reactor Pressure Vessel Sketch

DWG. NO. VS-04-01
 TOP GUIDE
 REV. 1



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

SECTION A-A

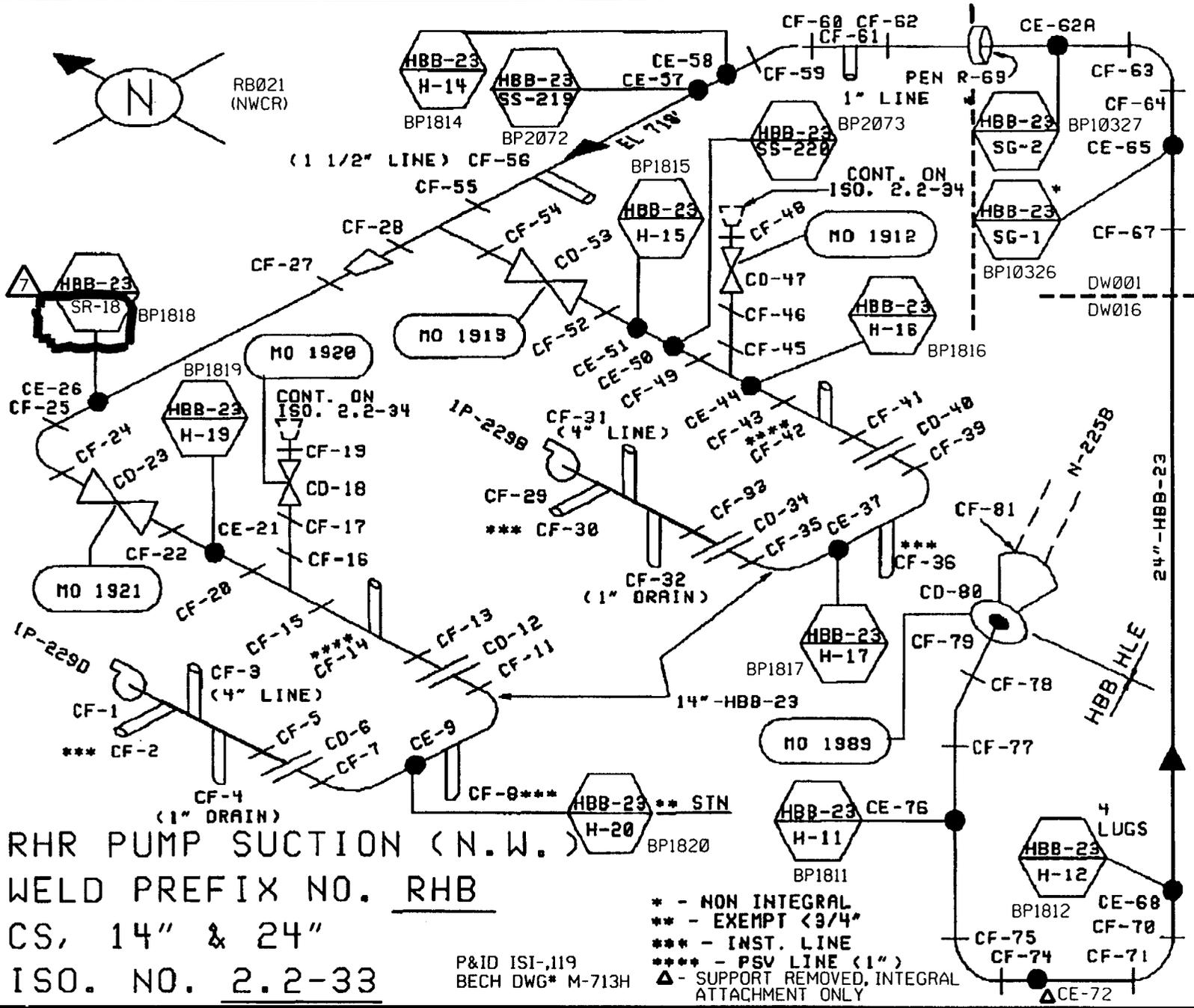
SHELL - REACTOR WATER
 TUBE - COOLING WATER

RHR HEAT EXCH A & B
 HEA-, HEB-
 FIGURE NO. 2.1-01

DRAWING RELEASE RECORD

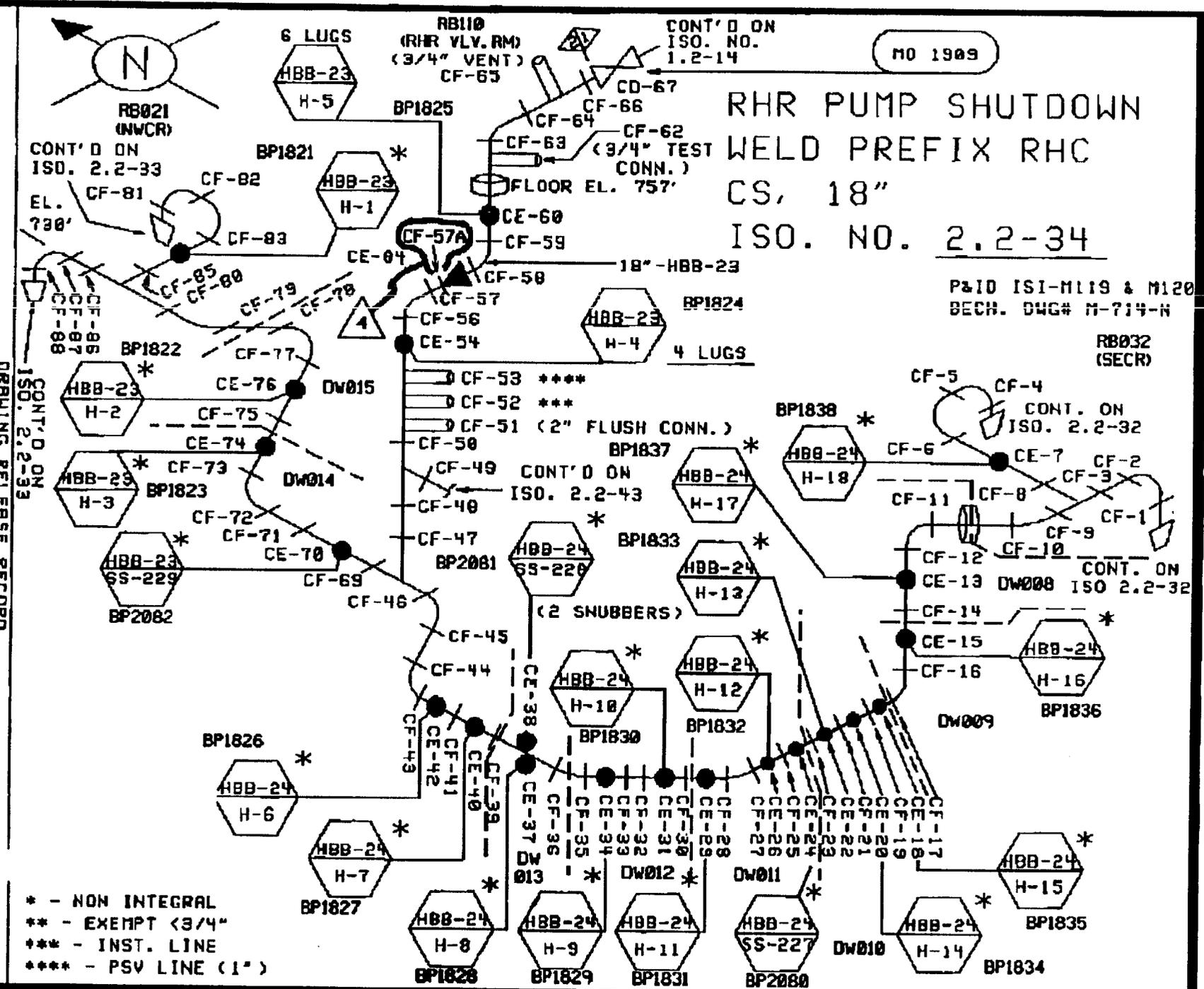
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	4-26-86	SMI	SMI	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DA	FED	GP	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	8-23-94	DA	FED	GP	REVISED PER 1ST INSPECTION WALKDOWN
4	3/4/97	JAH	TAK /	GP	REVISED PER DURF-0036

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	6/4/99	DA	GP	FED	REVISED PER DURF-U-0111
2	7-19-90	DA	GP	FED	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 DURF-0213
5	2-2-96	TAK	JW	GP	REV. PER DURF-0018
6	3-21-96	JAH	DA	GP	REV. PER DURF-00027

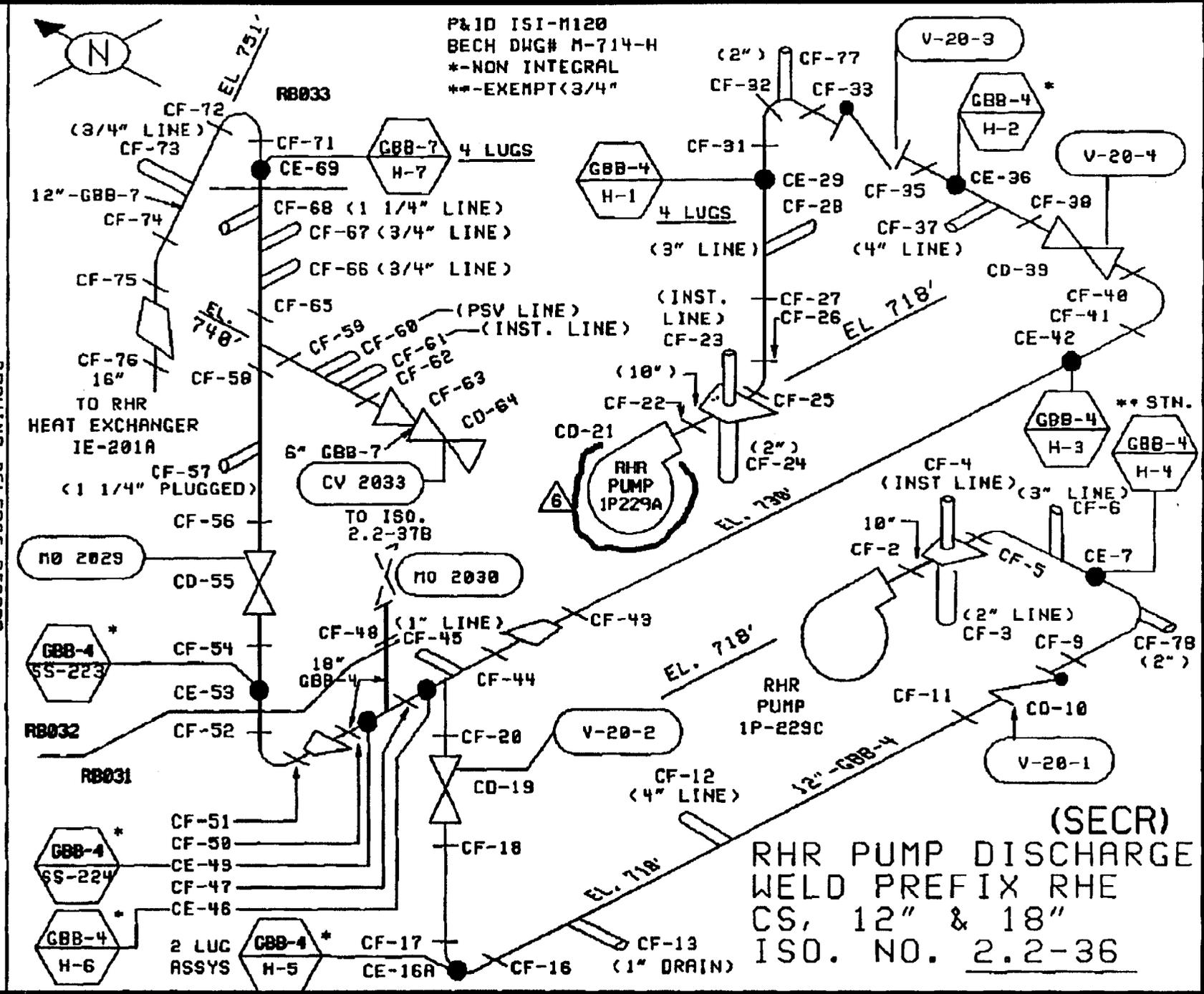


DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC

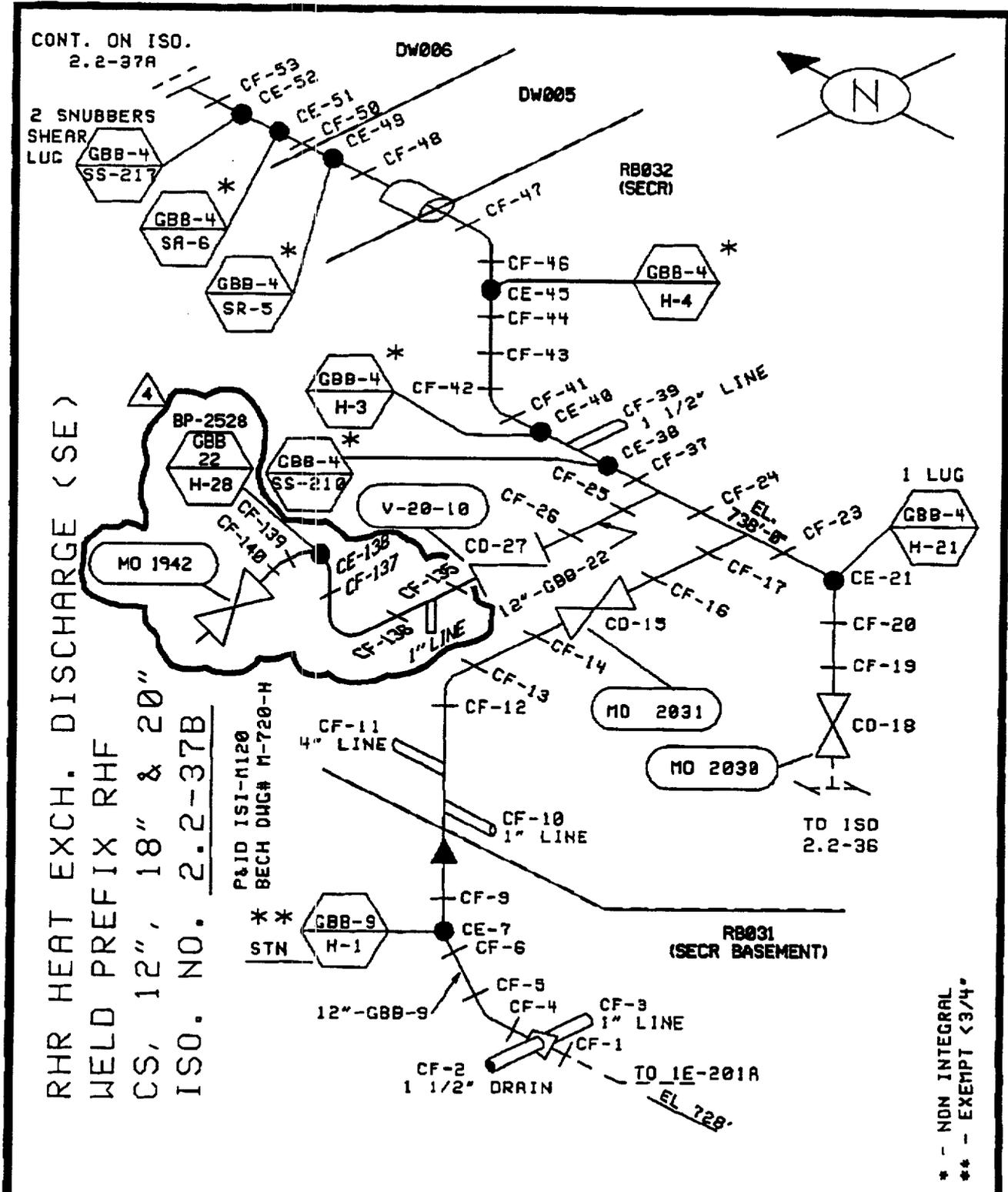
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	4-30-86	SAL	SAL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	7-18-90	DA	JAN	FED	180'S TO CNO FORM NT 95 PER MC-89-8794
3	7-22-94	DA	JAN	FED	REVISED PER ISI INSPECTION WALKDOWN
4	1/18/96	TAK	JW	GP	REV. PER DUF-0018



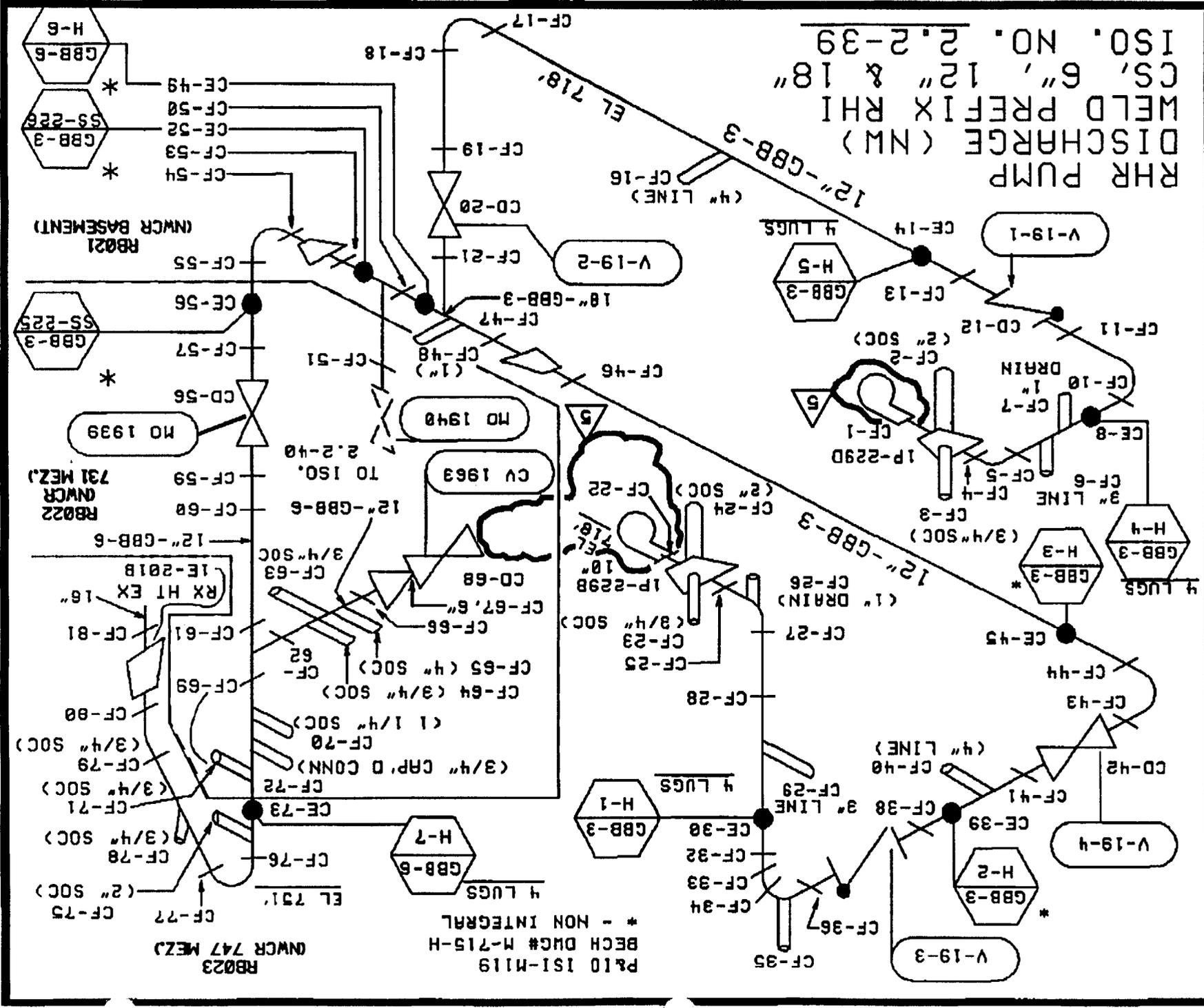
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	5-2-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLN
2	9-18-90	DA	GP	KRM	ISO'S TO CAD FORMAT RB PER NG-89-873+
3	5-13-91	DA	GP	AKM	PCN B ADDED WELD CF-48, OMITTED ON REV. 2
4	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JOF	GP	REVISED PER DURF-0013
6	1/19/95	TAK	JW	GP	REV. PER DURF-0018



DRAWING RELEASE RECORD



DRAWING RELEASE RECORD					
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	6-17-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DA	FED	GP	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	7-22-94	DA	TAK	GP	REVISED PER IST INSPECTION WALKDOWN
4	3/26/98	DA	TAK	GP	REVISED PER DURF-U0046

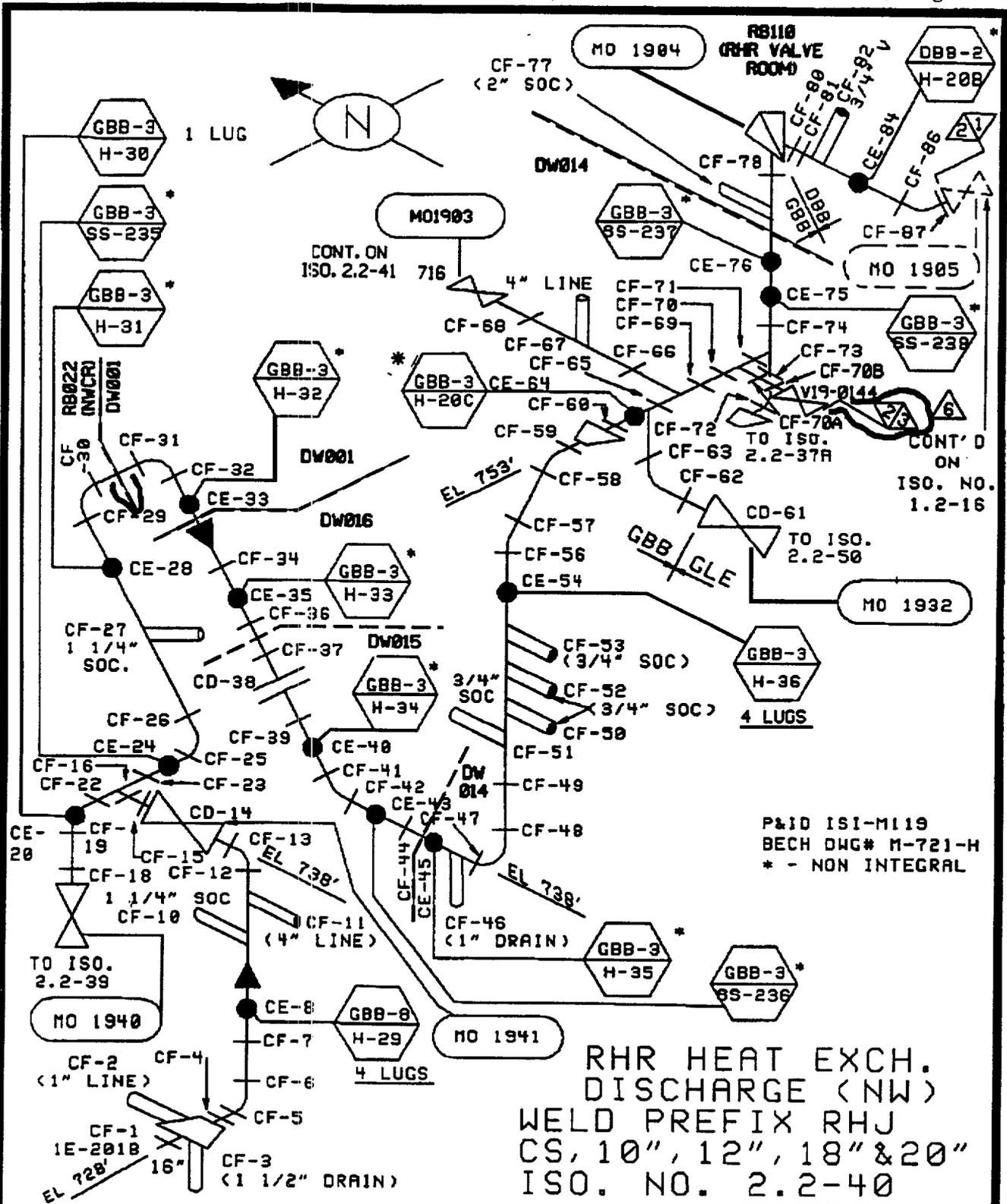


REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	6-10-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DA	GP	KKH	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	10-3-91	DA	BJB	GP	REVISION PER DDC 798
4	7-22-94	DA	JDF	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JDF	GP	REVISED PER DURF-0013

RHR PUMP DISCHARGE (NM)
 WELD PREFIX RHI
 CS, 6", 12" & 18"
 ISO. NO. 2.2-39

P&ID ISI-M119
 BECH DUC# M-715-H
 * - NON INTEGRAL

RB023 (NWCR 747 MEZ)
 EL 751'
 4 LUGS
 GBB-6 H-7
 CF-75 (2" SOC)
 CF-76
 CF-77
 CF-78 (3/4" SOC)
 CF-71 (3/4" SOC)
 CF-72 (3/4" SOC)
 CF-79 (3/4" SOC)
 CF-70 (3/4" SOC)
 CF-64 (3/4" SOC)
 CF-65 (4" SOC)
 CF-23 (8/4" SOC)
 CF-25
 CF-27
 CF-26 (1" DRAIN)
 12"-GBB-3
 3" LINE (3/4" SOC)
 H-3 GBB-3
 H-4 GBB-3
 4 LUGS
 CE-43
 CF-44
 CF-45
 V-19-4
 CD-42
 CF-41
 CF-39
 GBB-3 H-2
 V-19-3
 CF-36
 CF-35
 CF-34
 CF-32
 CF-30
 GBB-3 H-1
 4 LUGS
 CF-29 (3" LINE)
 CF-38
 CF-40 (4" LINE)
 CF-41
 CF-43
 CF-44
 CF-45
 12"-GBB-3
 3" LINE (3/4" SOC)
 CF-3
 CF-4
 CF-5
 CF-6
 CF-7
 CF-8
 CF-10
 1" DRAIN
 CF-1
 1P-229D
 CF-2
 (2" SOC)
 CF-11
 CD-12
 CF-13
 GBB-3 H-5
 4 LUGS
 CE-14
 V-19-1
 CF-17
 EL 718'
 12"-GBB-3
 (4" LINE)
 CF-16
 CF-19
 CD-20
 CF-21
 CF-22
 18"-GBB-3
 CF-47
 CF-48 (1")
 CF-46
 MO 1940
 CV 1963
 TO ISO.
 2.2-40
 MO 1939
 CD-56
 CF-57
 GBB-3 SS-225
 *
 RB022 (NWCR 731 MEZ)
 12"-GBB-6
 CF-58
 CF-59
 1E-201B
 RX HT EX 16"
 CF-61
 CF-68
 CD-68
 CF-67, 6"
 CF-66
 1P-229B
 10"
 EL 718'
 12"-GBB-6
 3/4" SOC
 CF-63
 RB021 (NWCR BASEMENT)
 CF-55
 CF-54
 CF-53
 CF-52
 GBB-3 SS-225
 *
 CE-49
 GBB-6 H-6



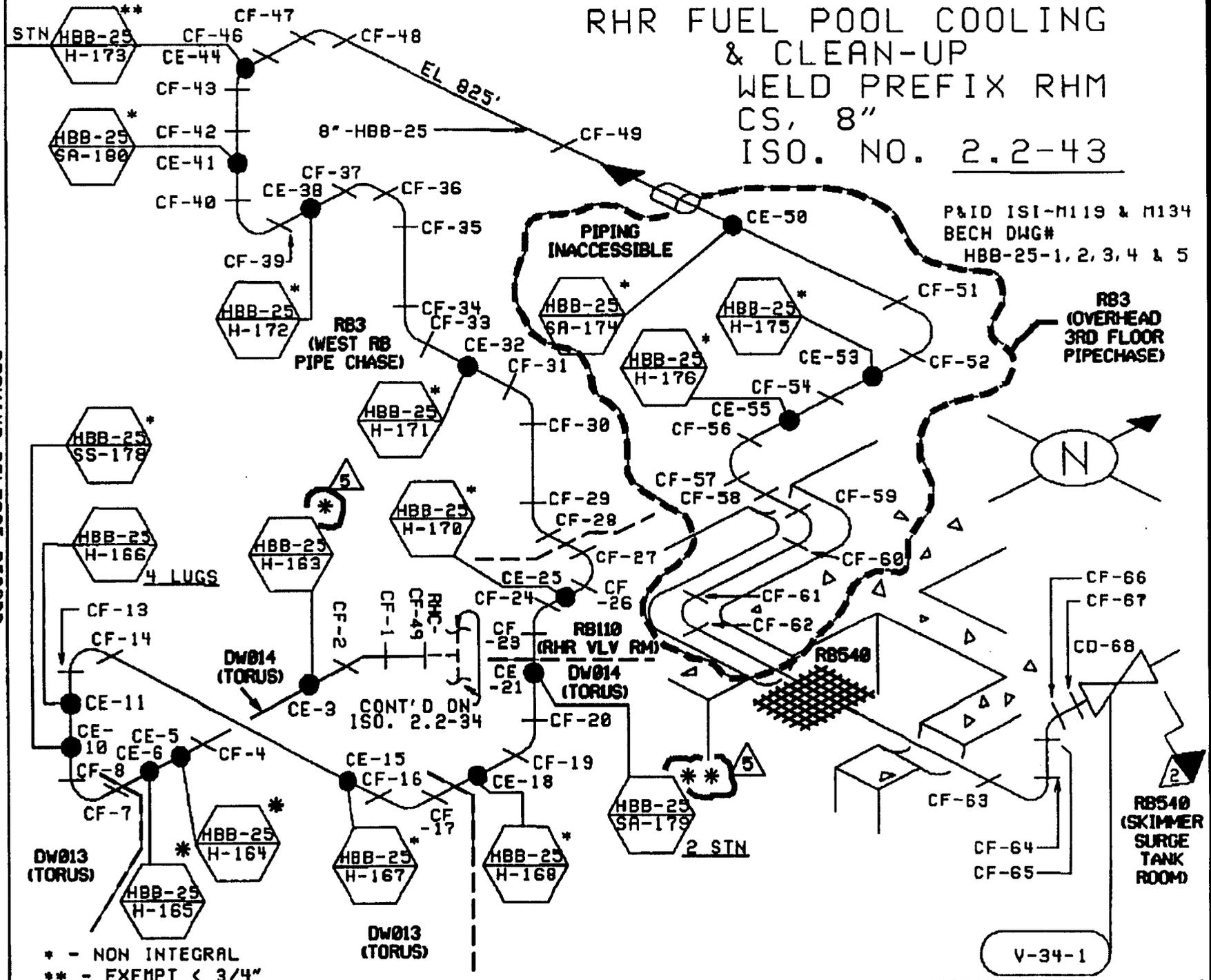
RHR HEAT EXCH.
DISCHARGE (NW)
WELD PREFIX RHJ
CS, 10", 12", 18" & 20"
ISO. NO. 2.2-40

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	6-28-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DA	GR	KKM	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	4-2-93	DA	GR	GP	REVISED NUMBER
4	7-22-94	DA	BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
5	1/19/96	TAK	DA	GP	REV. PER DURF-0018
6	3-21-96	JAH	DA	GP	REV. PER DURF-U0027

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

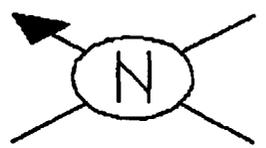


REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	6-23-86	SM	SM	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-8-90	DA	DA	CP	ISO'S TO CND FORMT AS PER NC-89-8794
3	7-22-94	TAK	DA	CP	REVISED PER ISI INSPECTION WALKDOWN
4	1/24/96	JAH	DA	CP	REV. PER DURF-0018
5	3-21-96	JAH	DA	CP	REV. PER DURF-U0027

DRAWING RELEASE RECORD

PURPOSE

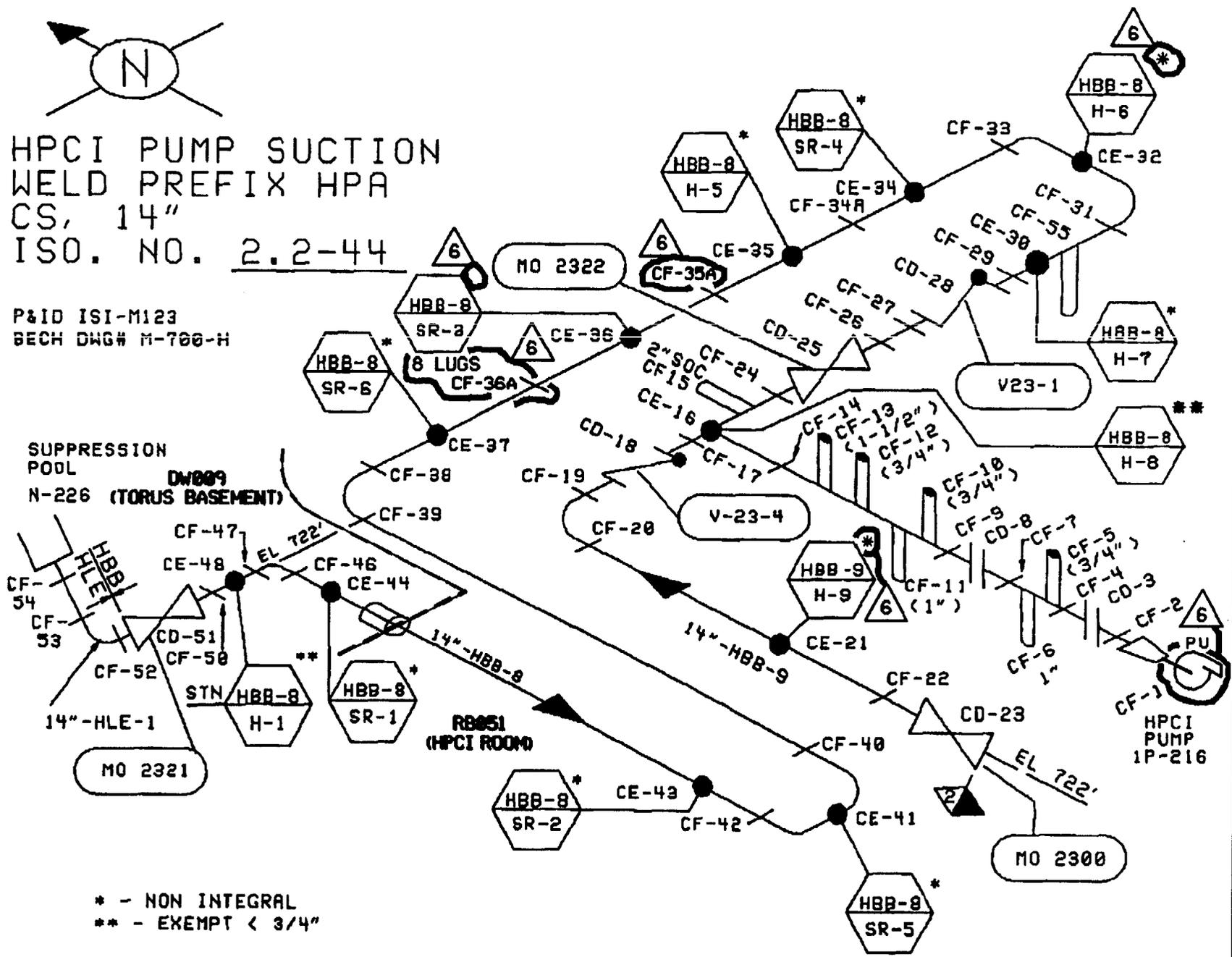
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-3-86	SML			ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DA	CR	KHM	ISO'S TO CRD FORHRT AS PER NG-89-079*
3	4-2-93	DA	CR		REVISED NUMBER
4	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JUF	GP	REVISED PER DWF-0013
6	1/19/96	TAK	DA	GP	REV. PER DWF-0018



HPCI PUMP SUCTION
WELD PREFIX HPA
CS, 14"
ISO. NO. 2.2-44

P&ID ISI-M123
BECH DWG# H-700-H

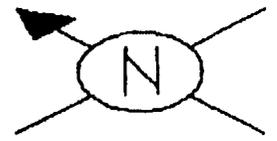
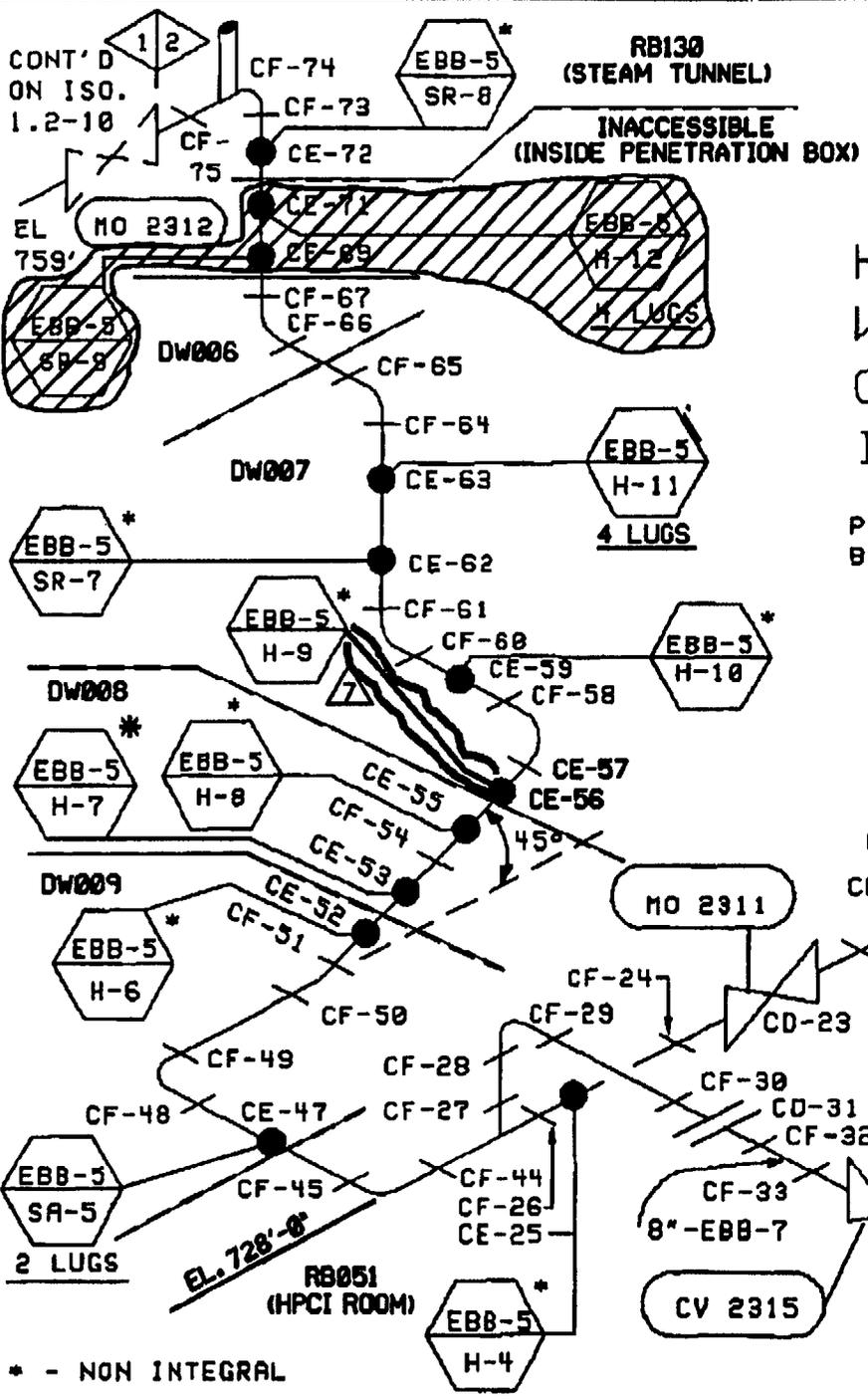
SUPPRESSION
POOL
DWB89
N-226 (TORUS BASEMENT)



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

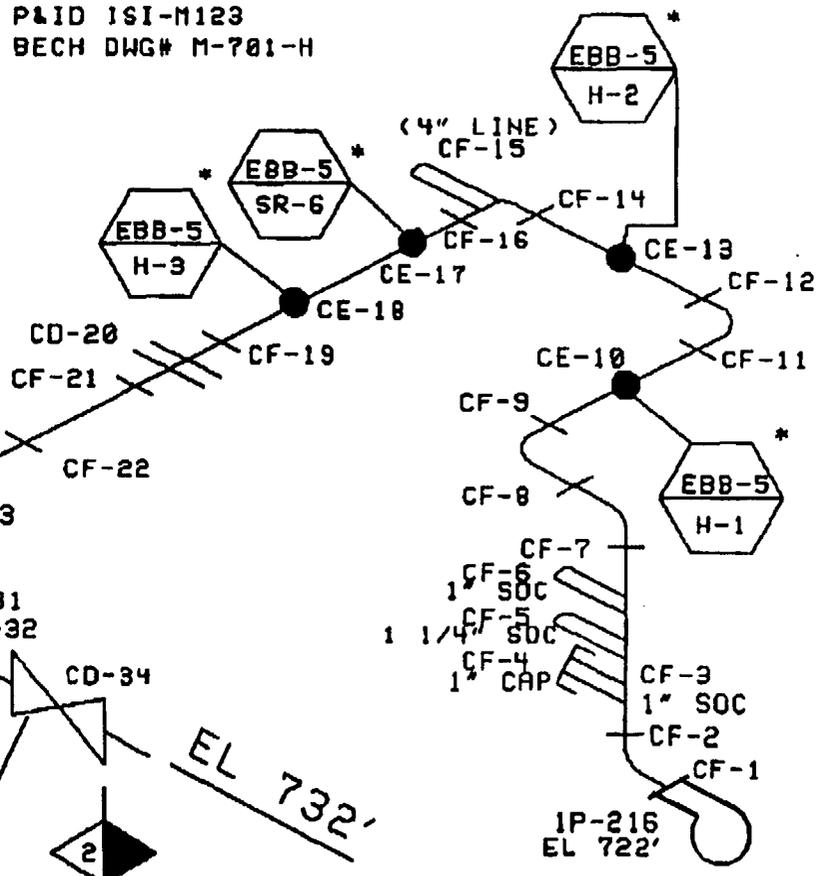
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	3-21-96	JAH	DA	GP	REV. PER DURF-U0027
2	9-18-90	DR	GP	KKH	ISO. S TO CND FORMIT AS PER NG-89-8794
3	10-3-91	DR	GP	GP	CORRECTING HANGER IDENTIFICATION
4	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JDF	GP	REVISED PER DURF-0013
6	1/19/96	TAK	DA	GP	REV. PER DURF-0018

DRAWING RELEASE RECORD



HPCI PUMP DISCHARGE
WELD PREFIX HPB
CS, 12" & 8"
ISO. NO. 2.2-45

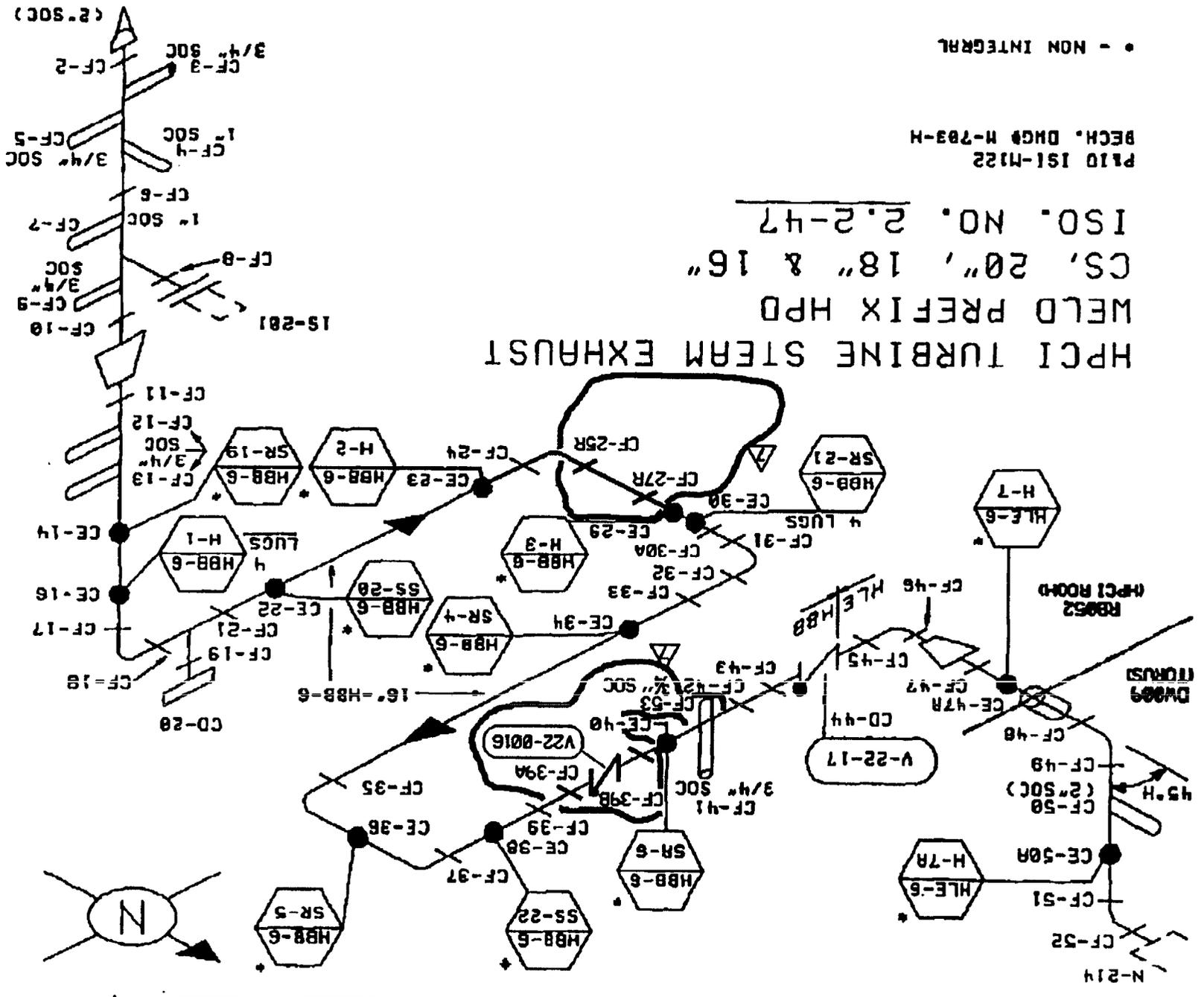
P&ID ISI-M123
BECH DWG# M-701-H



• - NON INTEGRAL
 P110 151-M122
 BECH. DWG# M-783-H

ISO. NO. 2.2-47
 WELD PREFIX HPD
 CS, 20", 18" & 16"

HPCI TURBINE STEAM EXHAUST



DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	3/4/97	JAH	TAK	GP	REVISED PER DURE-0036
2	4-18-96	DA	DA	GP	ISO'S TO CAD FORMAT AS PER M-88-0784
3	7-22-94	DA	FED	GP	REVISED PER 1ST INSPECTION WALKDOWN
4	7-6-95	DA	JDF	GP	REVISED PER DURE-0013
5	1/19/96	TAK	DA	GP	REV. PER DURE-0018
6	4/11/96	MS	TAK	GP	REV. PER DURE-0028

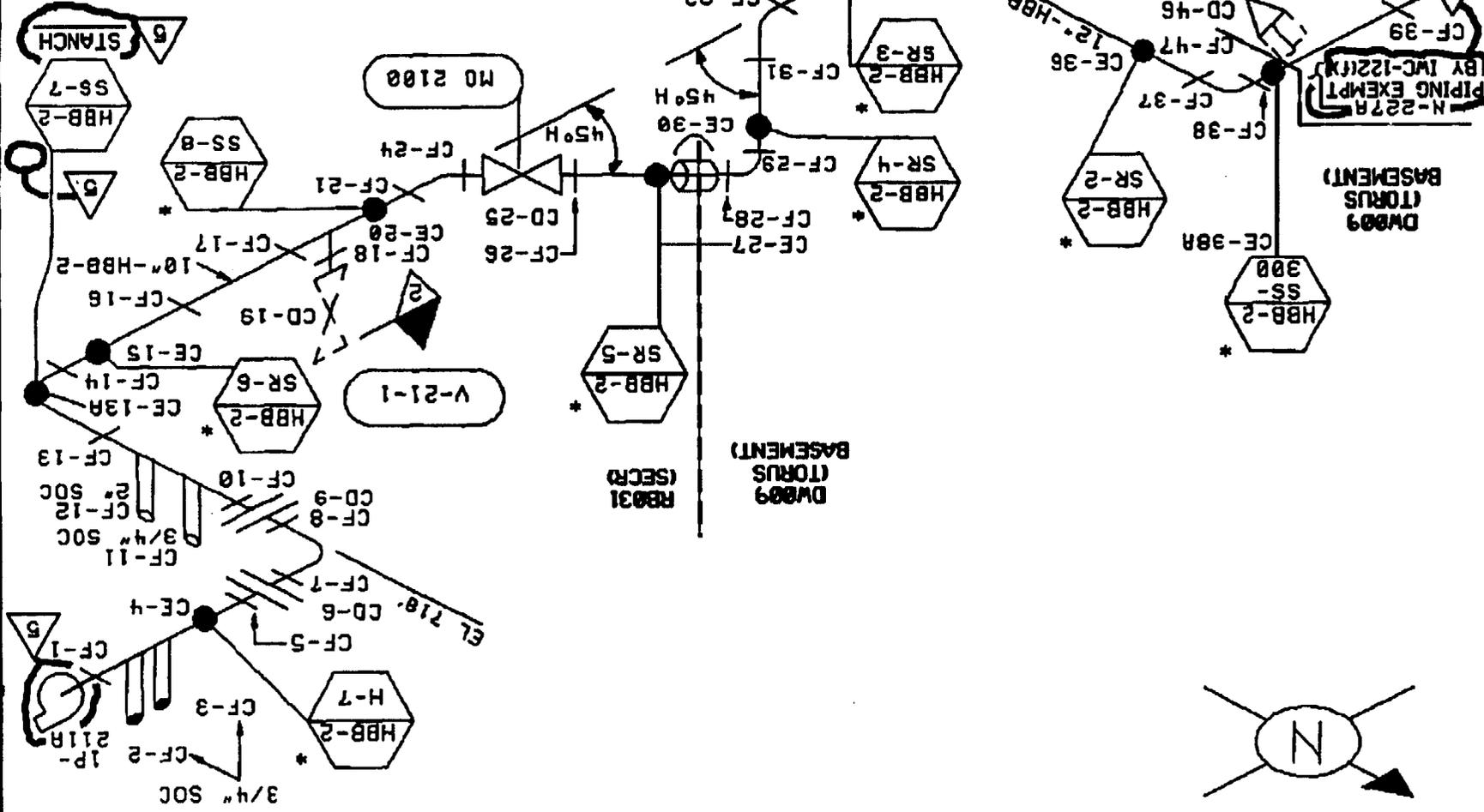
CORE SPRAY SUCTION (SE)

WELD PREFIX CSA

CS, 12"

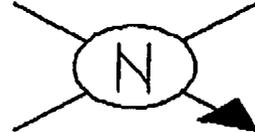
ISO. NO. 2.2-48

PAID ISI-M121
BECH DMG# M-708-H



DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-10-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-10-90	DA	JAH / BJB	GP	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	7-22-94	DA	JOF	GP	REVISED PER ISI INSPECTION WALKDOWN
4	7-6-95	DA	DA	GP	REVISED PER DURF-0013
5	1/24/96	TAK	DA	GP	REV. PER DURF-0018

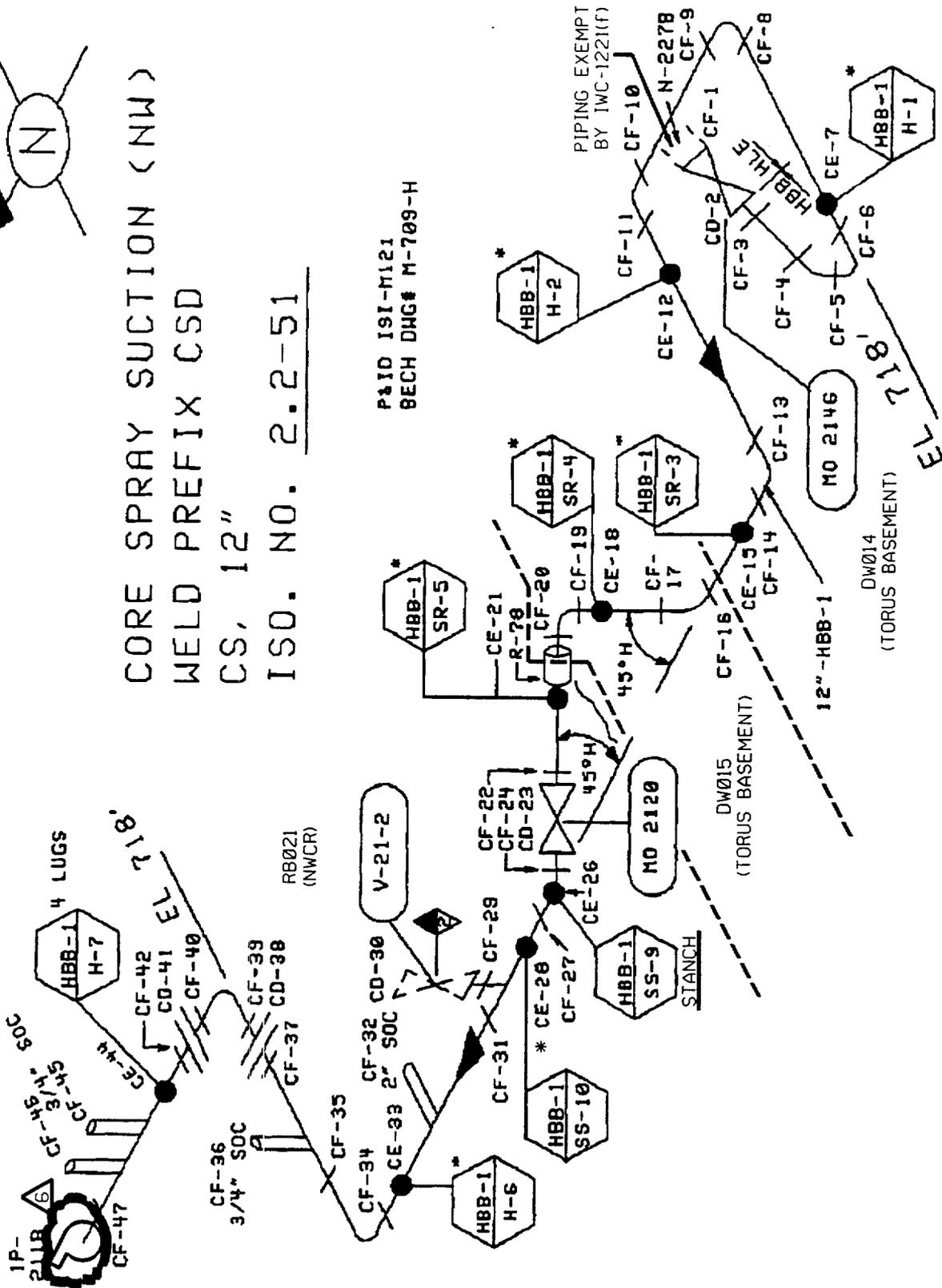


N-227A
PIPING EXEMPT
BY IMC-122(K)

* - NON INTEGRAL 5



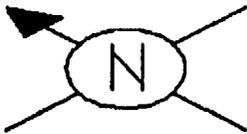
CORE SPRAY SUCTION (NW)
 WELD PREFIX CSD
 CS, 12"
 ISO. NO. 2.2-51



* - NON INTEGRAL

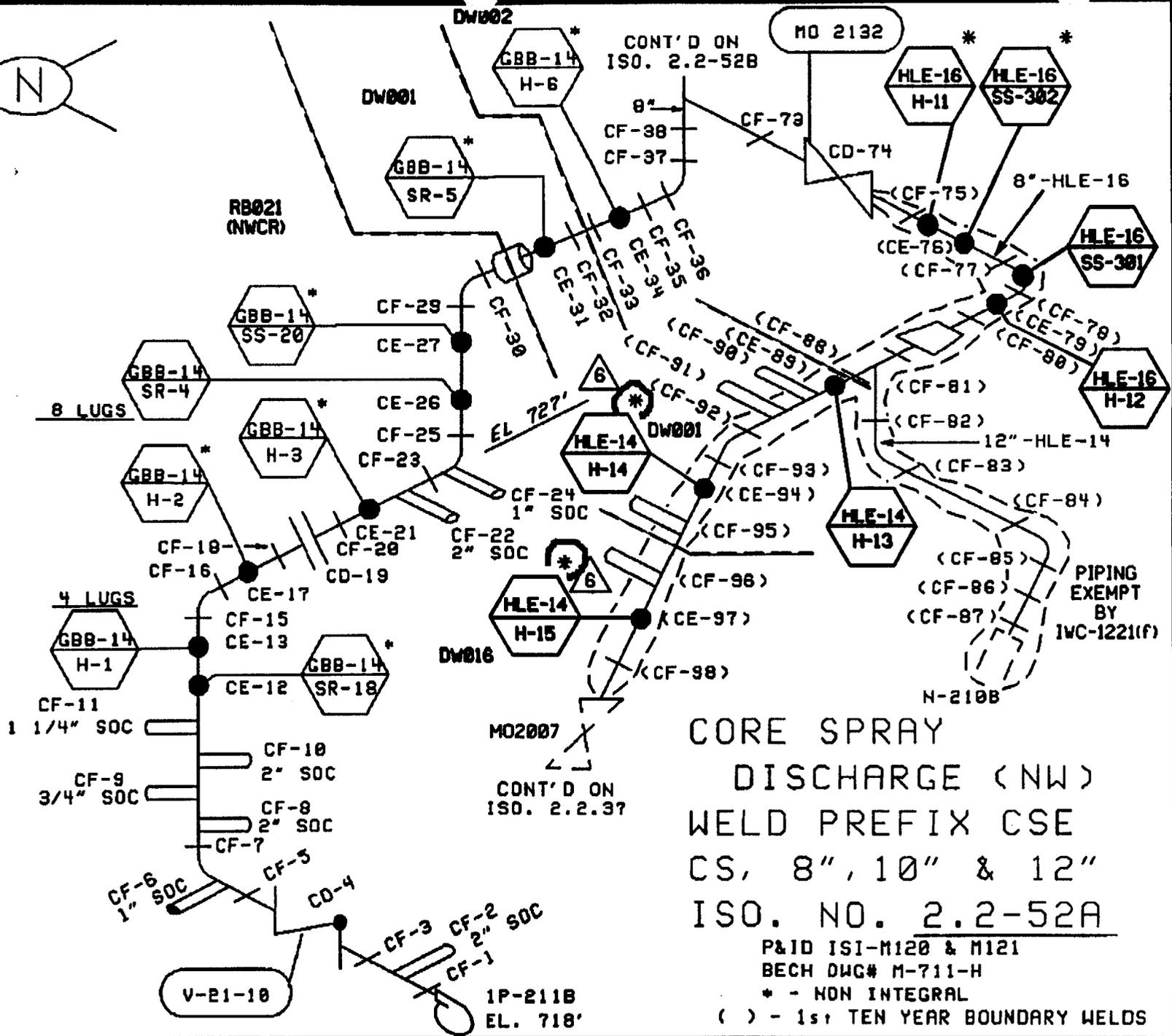
DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-11-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-15-90	[Signature]	[Signature]	[Signature]	ISO'S TO CAD FORMAT AS PER NG-88-878+
3	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
4	7-6-95	DA	JDF	GP	REVISED PER DURF-0013
5	1/24/96	TAK	DA	GP	REV. PER DURF-0018
6	6/4/99	DA	GP	FED	REVISED PER DURF-U-0111



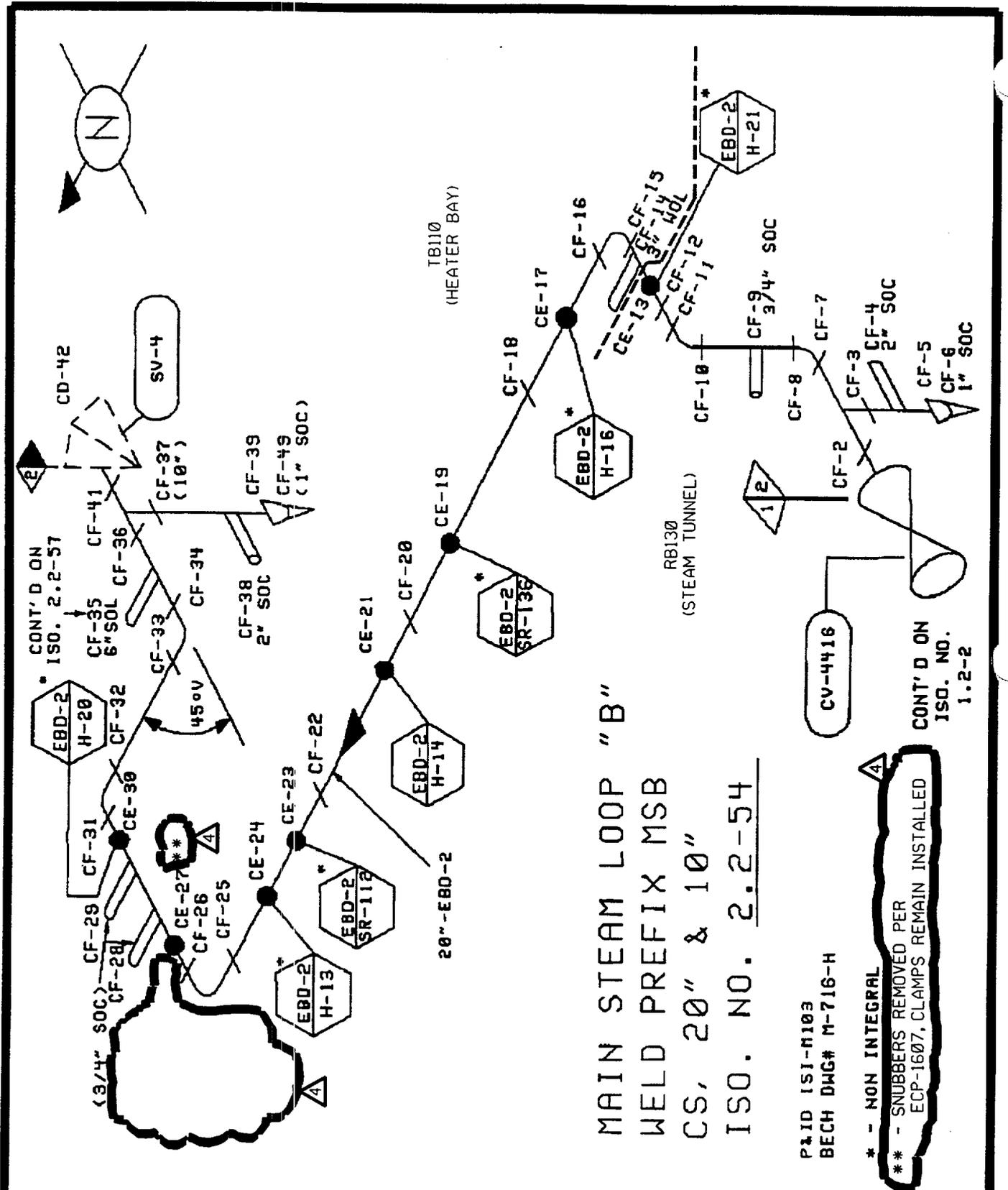
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-14-86	SHL	SHL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DR	GP	KKH	ISO'S TO CMO FORMAT NS PER NG-89-8794
3	4-24-93	DA	GP	GP	REVISED NUMBER
4	7-22-94	DA	RJB	GP	REVISED PER ISI INSPECTION WALKDOWN
5	1/24/96	TAK	DA	GP	REV. PER DURF-0018
6	3-21-96	JAH	DA	GP	REV. PER DURF-0027

DRAWING RELEASE RECORD



CORE SPRAY
DISCHARGE (NW)
WELD PREFIX CSE
CS, 8", 10" & 12"
ISO. NO. 2.2-52A

P&ID ISI-M120 & M121
BECH DWG# M-711-H
* - NON INTEGRAL
() - 1st TEN YEAR BOUNDARY WELDS



MAIN STEAM LOOP "B"
 WELD PREFIX MSB
 CS, 20" & 10"
 ISO. NO. 2.2-54

P&ID ISI-M103
 BECH DWG# M-716-H

* - NON INTEGRAL
 ** - SNUBBERS REMOVED PER
 ECP-1607, CLAMPS REMAIN INSTALLED

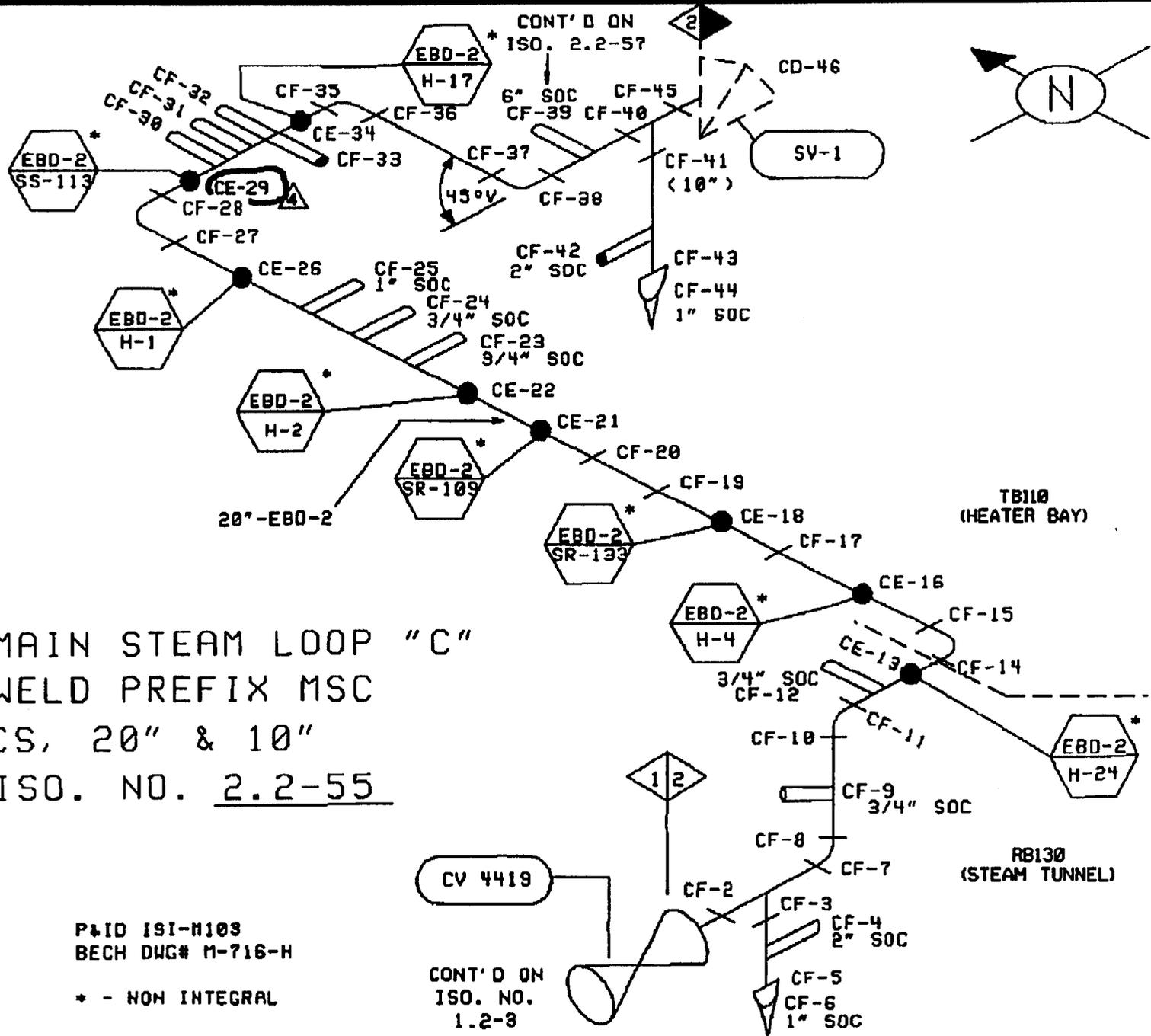
DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-15-86	SM	SM	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-90	DA	DA	RCM	ISO'S TO CAD FORMAT AS PER NG-89-8794
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECT:CN WALKDOWN
4	6/4/99	DA	GP	FED	REVISED PER DURF-U0111

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-16-86	SNL	SNL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	9-8-90	DA	DA	JAH / BJB	ISO'S TO CND FORMAT AS PER NG-89-8794
3	7-22-94	JAH	JAH	GP	REVISED PER ISI INSPECTION WALKDOWN
4	3/4/97	JAH	JAH	GP	REVISED PER DURF-0036

DRAWING RELEASE RECORD

MAIN STEAM LOOP "C"
 WELD PREFIX MSC
 CS, 20" & 10"
 ISO. NO. 2.2-55



P&ID ISI-H103
 BECH DWG# M-716-H

* - NON INTEGRAL

CONT'D ON
 ISO. NO.
 1.2-3

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-16-86	SAL	SAL	RCH	ISO'S FOR 2nd 10 YEAR PLAN
2	9-18-10	DA	DA	GP	ISO'S TO CND FORHRT AS PER NG-89-0794
3	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN

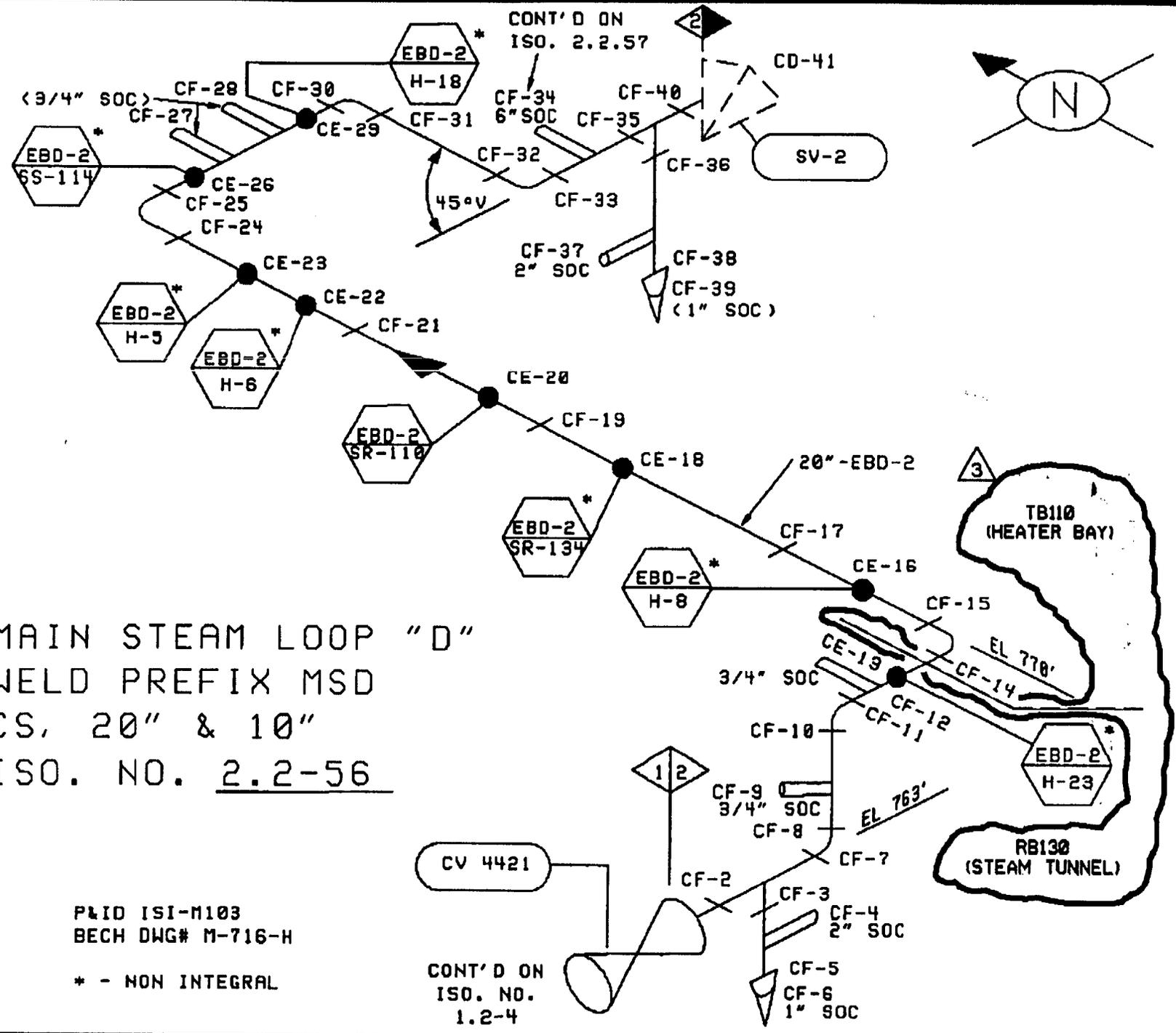
DRAWING RELEASE RECORD

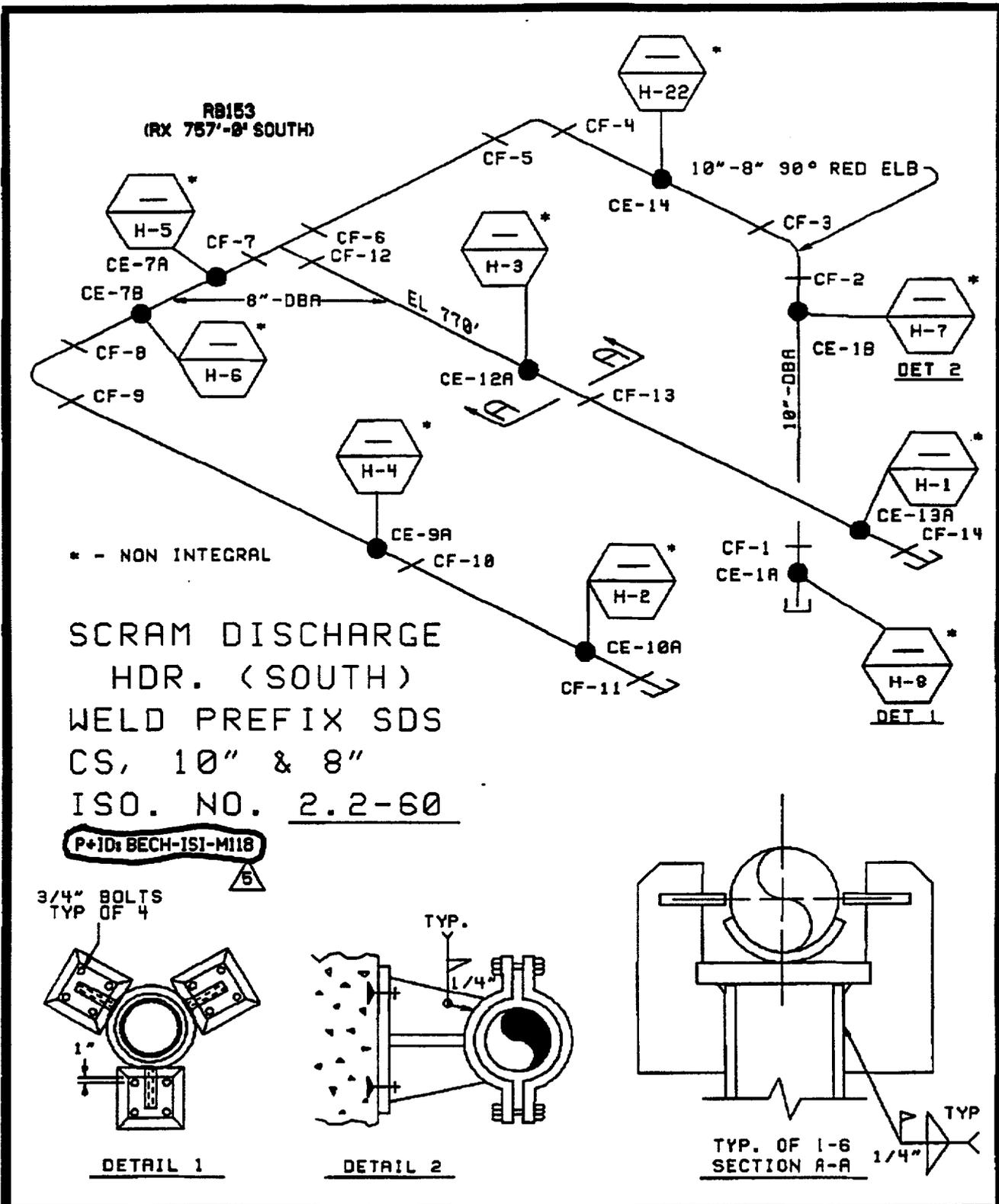
MAIN STEAM LOOP "D"
WELD PREFIX MSD
CS, 20" & 10"
ISO. NO. 2.2-56

P&ID ISI-M103
BECH DWG# M-716-H

* - NON INTEGRAL

CONT'D ON
ISO. NO.
1.2-4





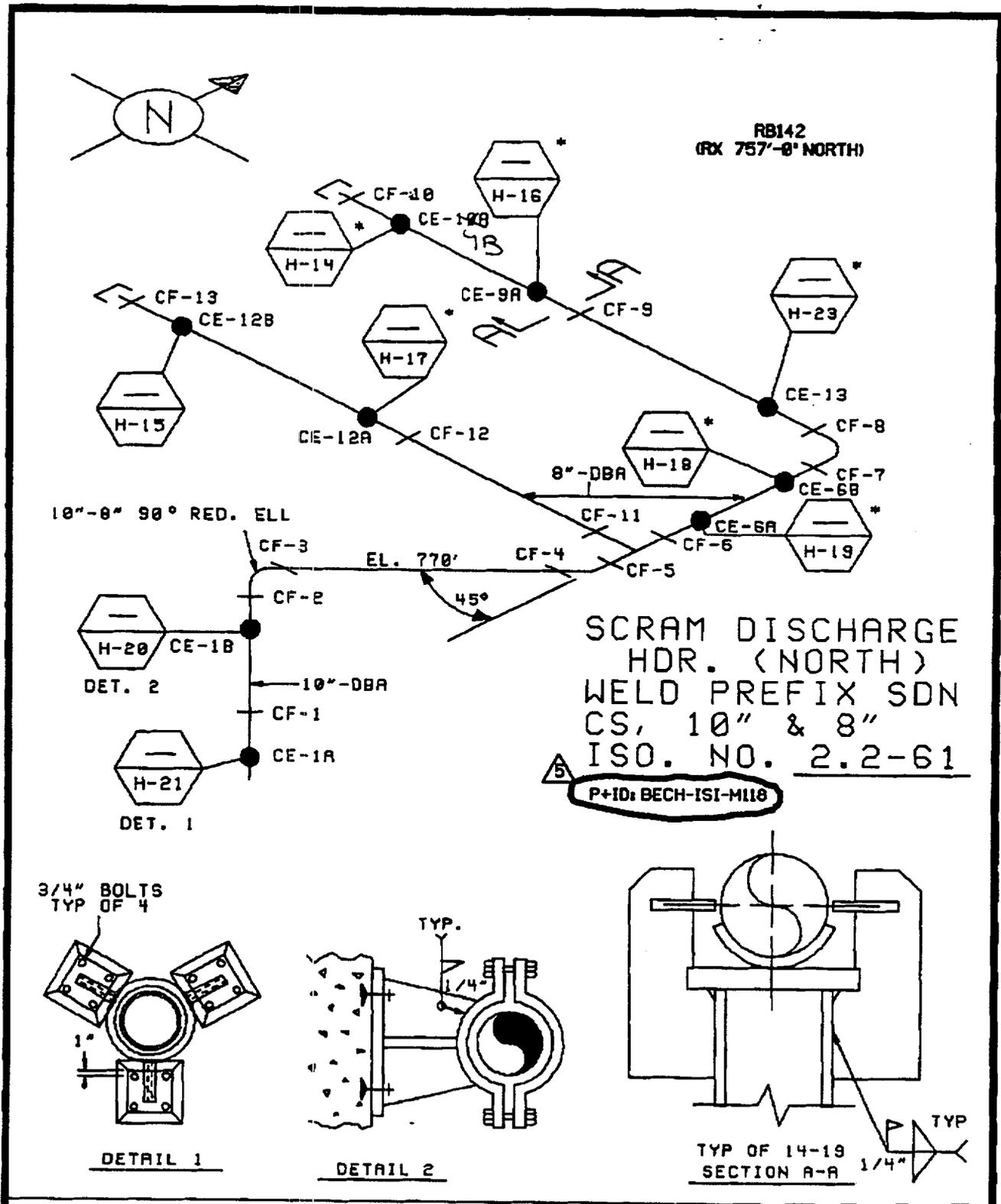
DETAIL 1

DETAIL 2

TYP. OF 1-6 SECTION A-A 1/4"

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	7-16-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	18-28-87	JPM	RCM	REL	MODIFICATION OF SUPPORTS, FCN 1329) SEQ 5
3	9-18-90	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	ISO'S TO CAD FORMAT AS PER HG-89-8794
4	7-22-94	DA	JAH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
5	1/19/96	TAK	DA	GP	REV. PER DURF-0018



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	7-18-90	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	ISO'S TO CAD FORMAT AS PER HQ-89-0794
4	7-22-94	DA	JNH / BJB	GP	REVISED PER ISI INSPECTION WALKDOWN
5	1/19/96	TAK	DA	GP	REV. PER DURF-0018

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part J, page 1 of 4

- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 MWE | |

STATUS OF WORK FOR THIRD TEN YEAR INTERVAL

(Those percentages shown are actual, where the percentages exceed the allowable only the maximum (34% for period one and 67% 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
B5.20	8	38%	63%	0%	
B5.130	8	38%	63%	0%	
B5.140	2	0%	50%	0%	
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%	
B9.12	0	0%	0%	0%	See Note 6
B9.21	9	22%	22%	0%	
B9.31	6	17%	33%	0%	
B9.32	1	0%	0%	0%	
B9.40	23	22%	40%	0%	
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**
December 01, 1999 through May 27,2001

Part J, page 2 of 4

- 1) Owners: IES Utilities Inc., an Alliant company Central Iowa Power Cooperative Corn Belt Power Cooperative
P.O. Box 351 Marion, IA. Humbolt, IA.
Cedar Rapids, IA. 52406
- 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: 565 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 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%	
C5.81	1	100%	100%	0%	
C7.10	5	N/A	N/A	N/A	Once per period
C7.20	5	N/A	N/A	N/A	Once per 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

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part J, page 3 of 4

- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 MWE | |

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**
December 01, 1999 through May 27,2001

Part J, page 4 of 4

- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 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.

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
December 01, 1999 through May 27,2001

Part K, page 1 of 1

- | | | |
|--|---|---|
| 1) Owners: IES Utilities Inc., 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: 565 MWE | |

RELIEF REQUESTS

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

<u>RELIEF REQUESTS</u>	<u>DESCRIPTION</u>
NDE-R014	Exemption from Appendix III calibration block notch dimensions
NDE-R028 Rev. 1	Limited Examination of Nozzle-to-Vessel Welds
<u>ALTERNATIVE TESTING</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-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-R023	Inaccessible welds located in Containment Penetrations
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"
NDE-R042	Underwater Welding
PR-002	Alternative Testing for Class2 Pressure Retaining Containment Penetrations connected to nonsafety related piping systems
PR-006/PR-007	Alternative Test Hold Time for the HPCI System
TAP-I005	Selection of B-J welds for examination criteria
TAP-I006	Selection of C-F pressure retaining welds for examination
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-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**
December 01, 1999 through May 27,2001

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Attachment 2
to NG-01-0975
Augmented Inspection Results RFO 17

**AUGMENTED INSPECTION RESULTS
RFO17**

System Description	Weld or Component Description	Report Number	Inspection Requirement	ISI Iso/ Fig Number	Acc	Examination
CORE SPRAY	CSB-F002	I01028	A	1.2-08	Y	UT
	CSB-F002A	I01029	A	1.2-08	Y	UT
	CSB-F004	I01030	A	1.2-08	Y	UT
	CSB-J003	I01031	A	1.2-08	Y	UT
REACTOR WATER CLEANUP	CUA-J001	I01034	A	1.2-11A	Y	UT
	CUA-J005	I01035	A	1.2-11A	Y	UT
	CUA-J006	I01036	A	1.2-11A	Y	UT
	CUA-J009	I01038	A	1.2-11A	Y	UT
	CUA-J010	I01039	A	1.2-11A	Y	UT
	CUA-J012	I01040	A	1.2-11A	Y	UT
	CUA-J013	I01041	A	1.2-11A	Y	UT
	CUA-J014	I01042	A	1.2-11A	Y	UT
	CUA-J015	I01043	A	1.2-11A	Y	UT
	CUA-J017	I01044	A	1.2-11A	Y	UT
	CUA-J018	I01045	A	1.2-11A	Y	UT
	CUA-J019	I01046	A	1.2-11A	Y	UT
	CUA-J020	I01047	A	1.2-11A	Y	UT
	CUA-J021	I01048	A	1.2-11A	Y	UT
CUA-J020	I01049	A	1.2-11A	Y	UT	
CUA-J023	I01050	A	1.2-11A	Y	UT	
RESIDUAL HEAT REMOVAL	RHB-F003	I01055	A	1.2-14	Y	UT
	RHB-J002	I01056	A	1.2-14	Y	UT
RECIRCULATION SYSTEM PUMP/VALVE BYPASS	RBA-J001	I01192	A	1.2-19A	Y	UT
	RBA-J002	I01193	A	1.2-19A	Y	UT
	RBA-J007	I01194	A	1.2-19A	Y	UT
	RBA-J008	I01195	A	1.2-19A	Y	UT
	RBA-J009	I01196	A	1.2-19A	Y	UT
	RBA-J010	I01197	A	1.2-19A	Y	UT
	RBA-J012	I01198	A	1.2-19A	Y	UT
RECIRCULATION PUMP SUCTION	RCA-J005A	I01099	A	1.2-19A	Y	UT
	RCA-J027	I01200	A	1.2-19A	Y	UT
RECIRCULATION RISER/MANIFOLD	RMA-J002	I01065	A	1.2-20	Y	UT
	RMA-J008	I01066	A	1.2-20	Y	UT
	RRF-F002	I01068	A	1.2-20	Y	UT
	RRH-J005	I01069	A	1.2-20	Y	UT
RECIRCULATION SYSTEM PUMP/VALVE BYPASS	RBB-J001	I01070	A	1.2-21A	Y	UT
	*RBB-J002	I01201	A	1.2-21A	Y	UT
	*RBB-J003	I01202	A	1.2-21A	Y	UT
	RCB-J030	I01203	A	1.2-21A	Y	UT
RECIRCULATION RISER/MANIFOLD	RRA-J004/J004A-OVL	I01075	A	1.2-22	Y	UT
	RRA-J005	I01076	A	1.2-22	Y	UT
	RRB-F002-OVL	I01077	A	1.2-22	Y	UT
	RRB-J007	I01078	A	1.2-22	Y	UT
	RRD-F002-OVL	I01079	A	1.2-22	Y	UT

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

A- BWRVIP-75 (* THESE WELDS ARE DOCUMENTED ON AR 22810)
 B- GE SILS
 C - NUREG 0619
 D- BWRVIP

E - BWRVIP-76
 F - BWRVIP-18
 G - BWRVIP-41
 H - OWNER DEFINED

**AUGMENTED INSPECTION RESULTS
RFO17**

System Description	Weld or Component Description	Report Number	Inspection Requirement	ISI Iso/ Fig Number	Acc	Examination
CONTROL ROD DRIVE	CRDRL NOZZLE	I01095	C	VS-01-41	Y	EVT-1
SHROUD	MANWAY WELDS	I01096	B	VS-02-11	Y	UT
	LEDGE	I01095	D	VS-02-11	Y	EVT-1
	SEAM WELDS H-1 THRU H-7 (SEE ATTACHED FOR % COVERAGE)	I01097	E	VS-02-14	Y	UT
TOP GUIDE	LATCH 46°	I01095	D	VS-04-06	Y	VT-1
	LATCH 226°	I01095	D	VS-04-06	Y	VT-1
	ALIGNMENT BLOCK/WELD 90°	I01095	D	VS-04-10	Y	VT-1
	ALIGNMENT BLOCK/WELD 180°	I01095	D	VS-04-10	Y	VT-1
	ALIGNMENT BLOCK/WELD 270°	I01095	D	VS-04-10	Y	VT-1
	ALIGNMENT BLOCK/WELD 0°	I01095	D	VS-04-10	Y	VT-1
CORE SPRAY	CREVICED WELDS	I01095	F	VS-05-01	Y	EVT-1
	NON-CREVICED WELDS	I01095	F	VS-05-01	Y	EVT-1
	SPARGERS	I01095	F	VS-05-02<1>	Y	EVT-1/VT-1
	BRACKETS	I01095	F	VS-05-10	Y	EVT-1
FEEDWATER	SPARGERS	I01095	C	VS-09-01	Y	VT-1/VT-3
JET PUMPS	JET PUMP #07	I01095	G	VS-11-01	Y	EVT-1
	JET PUMP #08	I01095	G	VS-11-01	Y	EVT-1
TORUS	SUPPORT #1	I01173	H	5.1-02<02>	Y	VT-3
	SUPPORT #2	I01174	H	5.1-02-02>	Y	VT-3
	EARTH QUAKE #1	I01175	H	5.1-02<02>	Y	VT-3
	SUPPORT #3	I01176	H	5.1-02<02>	Y	VT-3
	SUPPORT #4	I01177	H	5.1-02<02>	Y	VT-3
	SUPPORT #9	I01178	H	5.1-02<02>	Y	VT-3
	SUPPORT #10	I01179	H	5.1-02<02>	Y	VT-3
	EARTH QUAKE TIE #3	I01180	H	5.1-02<02>	Y	VT-3
	SUPPORT #11	I01181	H	5.1-02<02>	Y	VT-3
	SUPPORT #12	I01182	H	5.1-02<02>	Y	VT-3

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

A- BWRVIP-75 (* THESE WELDS ARE DOCUMENTED ON AR 22810)
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
RFO17**

WELD ID	PREVIOUS COVERAGE	RFO17 COVERAGE	COMMENTS
H-1	78% ⁽¹⁾	80.32% ⁽¹⁾	Limitations were due to lifting lugs and vertical welds
H-2	52.4% ⁽¹⁾	71.73% ⁽¹⁾	Limitations were due to welded tabs and thermocouples
H-3	78.6% ⁽¹⁾	79.60% ⁽¹⁾	Limitations were due to the equipment configuration and access
H-4	78.8%	86.22% (UPPER) 93.90% (LOWER)	Limitations were due to obstructions, vertical welds and locking lug
H-5	77.1%	95.34% (UPPER) 94.94% (LOWER)	Limitations were due to equipment problems and vertical welds
H-6A	73.9%	80.86% (UPPER) 80.08% (LOWER)	Limitations were due to jet pump sensing lines
H-6B	77.0% ⁽¹⁾	80.07% ⁽¹⁾	Limitations were due to jet pump sensing lines
H-7	69.4% (LOWER) 58.8% (UPPER)	61.28% (UPPER) 61.65% (LOWER)	Limitations were due to jet pump sensing lines

(1) one-sided exam

ACCESS HOLE COVER	RFO17 COVERAGE	INDICATION	COMMENTS
0°	76% Radial	2.5" Lack of Fusion ⁽¹⁾	Limitation due to weld configuration
180°	81% Circumferential 61% Radial 76% Circumferential	2.1" Lack of Fusion ⁽¹⁾	Limitation due to weld configuration

(1) Previous data did not identify any Lack of Fusion (LOF), only non-relevant indications and inside surface geometry. Comparison of previous data does not show any correlation with the LOF detected in RFO17.