

July 29, 2005

NG-05-0420
10 CFR 50.55a

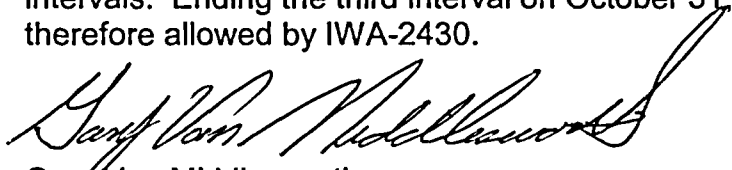
U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Duane Arnold Energy Center
Docket 50-331
License No. DPR-49

Inservice Inspection Report

In accordance with the requirements of Paragraph IWA-6230 of ASME, Section XI, 1989 Edition/No Addenda and 10 CFR Section 50.55a(g), Nuclear Management Company, LLC (NMC) herewith submits the Refueling Outage (RFO) 19 Inservice Inspection Summary Report (Enclosure 1). This report addresses examinations that were performed at the Duane Arnold Energy Center (DAEC) during the time period from April 21, 2003 through May 3, 2005. Information regarding augmented inspections performed during RFO 19 is included in Enclosure 2. Enclosure 3 provides amended information from previously submitted RFO 17 and RFO 18 Summary Reports. These pages are being provided to correct minor errors that were identified on three pages of these reports.

As noted on Form NIS-1 included in the RFO 19 Summary Report, the third ten-year interval began on November 1, 1996 and will end on October 31, 2006. This end date has been changed from that shown on Form NIS-1 included with the RFO 18 Summary Report. The second ten year interval began on November 1, 1985 and had been previously extended in accordance with IWA-2430(d), resulting in an eleven year second interval. IWA-2430(d) states that interval adjustments shall not cause successive intervals to be altered by more than 1 year from the original pattern of intervals. Ending the third interval on October 31, 2006 meets this requirement and is therefore allowed by IWA-2430.


Gary Van Middlesworth
Site Vice President, Duane Arnold Energy Center
Nuclear Management Company, LLC

Enclosures (3)

cc: Administrator, Region III, USNRC
Project Manager, DAEC, USNRC
Resident Inspector, DAEC, USNRC

**ENCLOSURE 1
TO NG-05-0420**

THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT
April 21, 2003 through May 3, 2005

ASME Section XI Summary Report
Duane Arnold Energy Center
Refueling Outage 19
(Period 3)

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

DUANE ARNOLD ENERGY CENTER

UNIT #1 PALO, IOWA

Commercial Service Date: February 1, 1975

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

April 21, 2003 through May 3, 2005

Dated: July 28, 2005

OWNER:

ALLIANT ENERGY

P.O. Box 351

Cedar Rapids, Iowa 52406

Prepared by:


ASME Section XI Administrator

Date:

7/26/05

Reviewed by:


Program Engineering Staff

Date:

7-26-05

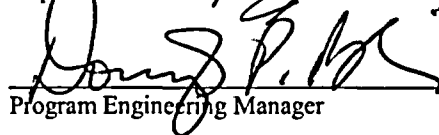
Reviewed by:


Inspection and Materials Supervisor

Date:

7-26-05

Concurred by:


Program Engineering Manager

Date:

7-26-05

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part A, Page 2 of 2

FORM NIS-1 (back)

8. Examination Dates 4/21/03 to 5/03/05 9. Inspection Interval from 11/01/96 to 10/31/06

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 2005

Signed Gary D. Van Middlesworth By Gary D. Van Middlesworth

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

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Iowa and employed by HSB CT of Hartford CT have inspected the components described in this Owner's Data Report during the period 4/21/03 to 5/3/05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Data Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Data Report. Furthermore, neither the Inspector, nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 7-27 2005.

JB 1496IA
Inspector's Signature Commissions NB 12329 ANEL
National Board, State, Province and No.

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

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part B, page 1 of 3

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

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**
April 21, 2003 through May 3, 2005

Part B, page 2 of 3

- | | | |
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CERTIFICATE OF INSERVICE INSPECTION

COMPONENTS EXAMINED:

CLASS 1

Component	Iso No
Reactor Vessel	1.1-08B VS-01-06/-07/-08 VS-01-22/-23/-41 VS-12-01/-02 VS-13-02/-03
Reactor Vessel Stabilizers	1.1-10
Main Steam	1.2-03/-04
Feedwater	1.2-05/-06
Core Spray	1.2-07
High Pressure Coolant Injection	1.2-09
Control Rod Drive Return	1.2-12A&B
Residual Heat Removal	1.2-16
Recirculation Pump 'A' Suction	1.2-19A
Recirculation Manifold 'A' and Risers 'F' & 'G'	1.2-20
Recirculation Drain 'A'	1.2-21B
Recirculation Manifold 'B' and Riser 'D'	1.2-22
Jet Pump Instrumentation	1.2-26
Liquid Level Control	1.2-27
Reactor Vessel Instrumentation	1.2-29

IVVI

Component	Iso No
Vessel Head	VS-01-06
Core Spray Brackets	VS-01-26
Feedwater Brackets	VS-01-27
Guide Rod Brackets	VS-01-28
Steam Dryer Brackets	VS-01-29/-30
Surveillance Specimen Brackets	VS-01-31
Jet Pump Riser Support Pads	VS-01-34

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part B, page 3 of 3

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

CERTIFICATE OF INSERVICE INSPECTION

COMPONENTS EXAMINED:

IVVI Continued

Component	Iso No
Shroud Ledge	VS-02-11
Peripheral Fuel Support Pieces	VS-03-09
Top Guide	VS-04-01
Sample Holder	VS-10-02
Bottom Head CRD Housing Stub Tubes	VS-12-01/-02

CLASS 2

Component	Iso No
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There were no Class 2 component or weld examinations performed during this outage.

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part C, page 1 of 1

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

CERTIFICATE OF INSERVICE INSPECTION

ABSTRACT:

The Inservice Inspection addressed in this report was performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI 1989 Edition, No Addenda, and the Duane Arnold Energy Center Updated Final Safety Analysis Report. The inspections were performed utilizing Non-Destructive Examination Techniques (i.e., UT, PT, MT, etc.). The examinations were conducted during the period of April 21, 2003 through May 3, 2005. The specific details and associated records of the examinations are on file at Duane Arnold Energy Center.

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

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**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part D, page 1 of 6

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

COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 1						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
Reactor Vessel	1R215(02-19)	I05002	UT	1.1-08	B-O	Accepted
	1R215(02-27)	I05003	UT	1.1-08	B-O	Accepted
	1R215(42-27)	I05004	UT	1.1-08	B-O	Accepted
	1R215(06-23)	I05125	VT-1	1.1-08	B-G-2	Accepted
	1R215(10-11)	I05146	VT-1	1.1-08	B-G-2	Accepted
	1R215(10-23)	I05147	VT-1	1.1-08	B-G-2	Accepted
	1R215(14-07)	I05128	VT-1	1.1-08	B-G-2	Accepted
	1R215(14-11)	I05129	VT-1	1.1-08	B-G-2	Accepted
	1R215(18-31)	I05131	VT-1	1.1-08	B-G-2	Accepted
	1R215(22-03)	I05132	VT-1	1.1-08	B-G-2	Accepted
	1R215(22-07)	I05133	VT-1	1.1-08	B-G-2	Accepted
	1R215(22-11)	I05134	VT-1	1.1-08	B-G-2	Accepted
	1R215(26-11)	I05136	VT-1	1.1-08	B-G-2	Accepted
	1R215(26-31)	I05137	VT-1	1.1-08	B-G-2	Accepted
	1R215(30-15)	I05138	VT-1	1.1-08	B-G-2	Accepted
	1R215(30-31)	I05139	VT-1	1.1-08	B-G-2	Accepted
	1R215(30-39)	I05140	VT-1	1.1-08	B-G-2	Accepted
	1R215(34-11)	I05144	VT-1	1.1-08	B-G-2	Accepted
	1R215(34-39)	I05143	VT-1	1.1-08	B-G-2	Accepted
	1R215(34-07)	I05141	VT-1	1.1-08	B-G-2	Accepted by Replacement CAP036901
	HCC-B002 (HOLES 40-60)	I05069	UT	VS-01-06	B-A	Accepted
	HMC-B001	I05070	UT	VS-01-06	B-A	Accepted
	HMC-B002	I05071	UT	VS-01-06	B-A	Accepted
	HMC-B003	I05072	UT	VS-01-06	B-A	Accepted
	HMC-B004	I05073	UT	VS-01-06	B-A	Accepted
	HMC-B005	I05074	UT	VS-01-06	B-A	Accepted
	HMC-B006	I05075	UT	VS-01-06	B-A	Accepted
	HCC-C001 (HOLES 40-60)	I05076	UT	VS-01-06	B-A	Accepted
	HCC-C001 (HOLES 60-20)	I05076	UT	VS-01-06	B-A	Accepted
	HCA-B001	I07078	UT	VS-01-07	B-A	Accepted
	HMA-B001	I05079	UT	VS-01-07	B-A	Accepted
	HMA-B002	I05080	UT	VS-01-07	B-A	Accepted
	HMA-B003	I05081	UT	VS-01-07	B-A	Accepted
	HMA-B004	I05082	UT	VS-01-07	B-A	Accepted
	HMA-B005	I05083	UT	VS-01-07	B-A	Accepted
	HMA-B006	I05084	UT	VS-01-07	B-A	Accepted

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part D, page 2 of 6

- | | | |
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Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324 | 3) Plant Unit: #1 | |
| 4) Owners Certificate of Authorization (if required): N/A | 5) Commercial Service Date: 02/01/75 | |
| 6) National Board Number of Unit: N/A | Gross Generating Capacity: 614 MWE | |

COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 1 Continued						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
	HMA-B007	I05085	UT	VS-01-07	B-A	Accepted
	HMA-B008	I05086	UT	VS-01-07	B-A	Accepted
	HMA-B009	I05087	UT	VS-01-07	B-A	Accepted
	HCA-H002	I05088	MT	VS-01-08	B-K	Accepted
	VSK-K001	I05089	VT-3	VS-01-08	F-A	Accepted
	VFA-E001	I05001	VT-2	VS-01-22	B-E	Accepted
	VFA-E002	I05001	VT-2	VS-01-23	B-E	Accepted
	VCB-C005	I05090	UT	VS-01-41	B-A	Accepted
	VLB-A001	I05093	UT	VS-01-41	B-A	Accepted
	VLB-A002	I05094	UT	VS-01-41	B-A	Accepted
	VLC-B001	I05095	UT	VS-01-41	B-A	Accepted
	VLC-B002	I05096	UT	VS-01-41	B-A	Accepted
	VLD-B001	I05097	UT	VS-01-41	B-A	Accepted
	VLD-B002	I05098	UT	VS-01-41	B-A	Accepted
	BH-CRD	I05001	VT-2	VS-12-01	B-E	Accepted
	HSING/ST TUB					
	BH-CRD STUB	I05001	VT-2	VS-12-02	B-E	Accepted
	TUBES					
	BH-INCORE	I05001	VT-2	VS-13-03	B-E	Accepted
	HOUSING					
Reactor Vessel Stabilizers	VSW-0 AZ	I05158	MT	1.1-10	B-K	Accepted
	VSW-180 AZ	I05159	MT	1.1-10	B-K	Accepted
	VSW-180 AZ	I05159	VT-3	1.1-10	F-A	Accepted
	VSW-270 AZ	I05160	MT	1.1-10	B-K	Accepted
	VSW-270 AZ	I05160	VT-3	1.1-10	F-A	Accepted
	VSW-90 AZ	I05161	MT	1.1-10	B-K	Accepted
	VSW-90 AZ	I05161	VT-3	1.1-10	F-A	Accepted
Main Steam	MSC-D001	I05005	UT	1.2-03	B-D	Accepted
	MSC-D001	I05005	UT	1.2-03	B-D	Accepted
	INNER RADIUS					
	MSD-D001	I05007	UT	1.2-04	B-D	Accepted
	MSC-D001	I05007	UT	1.2-04	B-D	Accepted
	INNER RADIUS					

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
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Part D, page 3 of 6

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

COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 1 Continued						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
Feedwater	FWA-THERM SLV	I05010	UT	1.2-05	R-A*	Accepted
	FWB-D001	I05011	UT	1.2-05	B-D	Accepted
	FWB-D001	I05011	UT	1.2-05	B-D	Accepted
	INNER RADIUS					
	FWA-J003	I05014	UT	1.2-05	R-A*	Accepted
	FWB-K032	I05013	VT-3	1.2-05	F-A	Accepted
	FWC-D001	I05017	UT	1.2-06	B-D	Accepted
	FWC-D001	I05017	UT	1.2-06	B-D	Accepted
	INNER RADIUS					
	FWC-THERM	I05018	UT	1.2-06	R-A*	Accepted
	SLEV					
	FWD-D001	I05019	UT	1.2-06	B-D	Accepted
	FWD-D001	I05019	UT	1.2-06	B-D	Accepted
	INNER RADIUS					
	FWC-J002	I05021	UT	1.2-06	R-A*	Accepted
	FWC-J003	I05022	UT	1.2-06	R-A*	Accepted
	FWC-J005	EC05006	UT	1.2-06	R-A*	Accepted
	FWC-J005	I05023	UT	1.2-06	R-A*	Accepted
	FWC-J006	I05024	UT	1.2-06	R-A*	Accepted
	FWC-J006	EC05006	UT	1.2-06	R-A*	Accepted
	FWC-K004	I05025	VT-3	1.2-06	F-A	Accepted
	FWC-K033	I05026	VT-3	1.2-06	F-A	Accepted
	FWD-J011	EC05058	UT	1.2-06	R-A*	Accepted
	FWD-J016	EC05059	UT	1.2-06	R-A*	Accepted
Core Spray	CSA-J011	I05032	UT	1.2-07	R-A*	Accepted
	CSA-J012	I05033	UT	1.2-07	R-A*	Accepted
High Pressure Coolant Injection	PSA-J001	I05034	UT	1.2-09	R-A*	Accepted
	PSA-J004	I05035	UT	1.2-09	R-A*	Accepted
Control Rod Drive Return	CRA-J032	I05040	UT	1.2-12B	R-A*	Accepted
Residual Heat Removal	RHD-J008	I05042	UT	1.2-16	R-A*	Accepted
	RHD-J009	I05043	UT	1.2-16	R-A*	Accepted
Recirculation Pump 'A' Suction	RCA-J012	I05044	UT	1.2-19A	R-A*	Accepted
	RCA-J021	I05016	UT	1.2-19A	R-A*	Accepted

**THIRD TEN YEAR INTERVAL
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Part D, page 4 of 6

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COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 1 Continued						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
Recirculation Manifold 'A' and Risers E, F, G & H	RRG-D001	I05045	UT	1.2-20	B-D	Accepted
	RRG-D001 INNER RADIUS	I05045	UT	1.2-20	B-D	Accepted
	RRG-F002	I05048	UT	1.2-20	R-A*	Accepted
	RRG-J003	I05049	UT	1.2-20	R-A*	Accepted
'A' Recirculation Drain	RDB-J005	I05053	UT VT-2	1.2-21B	R-A*	Accepted
Recirculation Manifold 'B' and Risers A, B, C & D	RRD-J005	I05058	UT	1.2-22	R-A*	Accepted
Jet Pump Instrumentation	JPB-D001	I05061	UT	1.2-26	B-D	Accepted
	JPB-D001 INNER RADIUS	I05061	UT	1.2-26	B-D	Accepted
Liquid Level Control	LCA-D001	I05064	UT	1.2-27	B-D	Accepted
	LCA-D001 INNER RADIUS	I05064	UT	1.2-27	B-D	Accepted
Reactor Vessel Instrumentation	VIB-D001	I05065	UT	1.2-29	B-D	Accepted
	VIB-D001 INNER RADIUS	I05065	UT	1.2-29	B-D	Accepted
Reactor Vessel Internals	Vessel Head	I05149	VT-3	VS-01-06	B-N-1	Accepted
	CSB Welds-210°	I05149	VT-3	VS-01-26	B-N-2	Accepted
	CSB Welds-330°	I05149	VT-3	VS-01-26	B-N-2	Accepted
	FWB Welds NE - 315°	I05149	VT-3	VS-01-27	B-N-2	Accepted
	FWB Welds NW - 225°	I05149	VT-3	VS-01-27	B-N-2	Accepted
	GRB Welds-180°	I05149	VT-3	VS-01-28	B-N-2	Accepted
	Guide Rod Brt-180°	I05149	VT-3	VS-01-28	B-N-1	Accepted
	DSB-225°	I05149	VT-3	VS-01-29	B-N-2	Accepted
	DSB-315°	I05149	VT-3	VS-01-29	B-N-2	Accepted
	DHB-211°	I05149	VT-3	VS-01-30	B-N-2	Accepted
	DHB-329°	I05149	VT-3	VS-01-30	B-N-2	Accepted
	SH Welds-288°-LW	I05149	VT-1	VS-01-31	B-N-2	Accepted
	SH Welds-288°-UP	I05149	VT-3	VS-01-31	B-N-2	Accepted

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part D, page 5 of 6

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

COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 1 Continued						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results
	JPR-SUPP PAD-144°	I05149	VT-1	VS-01-34	B-N-2	Accepted
	JPR-SUPP PAD-252°	I05149	VT-1	VS-01-34	B-N-2	Accepted
	SHROUD LEDGE 0°-180°	I05149	VT-3	VS-02-11	B-N-1	Accepted
	CSS-PERIPH FUEL SUP	I05149	VT-3	VS-03-09	B-N-2	Accepted
	TOP GUIDE	I05149	VT-3	VS-04-01	B-N-1	Accepted
	SAMPLE HLDR-288°	I05149	VT-3	VS-10-02	B-N-1	Accepted

*Risk-Informed process was used.

CLASS 1 PRESSURE TESTS						
Component	Description	ISI Report	Examination	ISI ISO	ASME XI Category	Results
Class 1 Hydrostatic Pressure Test	STP 3.10.1-02	I05001	VT-2	ISONO-P	B-P	Accepted

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part D Page 6 of 6

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

COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 2						
Component	Description	ISI Report	Examination	ISI Iso	ASME XI Category	Results

There were no Class 2 component or weld examinations performed during this outage.

CLASS 2 PRESSURE TESTS						
Component	Description	ISI Report	Examination	ISI ISO	ASME XI Category	Results
Core Spray	STP NS510002	I03119	VT-2	ISONO-P	C-H	Accepted
HPCI	STP NS520001	I05100	VT-2	ISONO-P	C-H	Accepted
HPCI (Steam Tunnel Components)	STP NS520003	I05162	VT-2	ISONO-P	C-H	Accepted
Standby Liquid Control	STP NS530001	I04001	VT-2	ISONO-P	C-H	Accepted
Main Steam	STP NS830003	I05102	VT-2	ISONO-P	C-H	Accepted
Residual Heat Removal	STP NS490003	I03118	VT-2	ISONO-P	C-H	Accepted
CRD Hydraulic	STP NS550001	I05157	VT-2	ISNO-P	C-H	Accepted

IWE COMPONENTS *						
Component	Description	ISI Report	Exam Method	ISI ISO	ASME XI Category	Results
Drywell	STP 3.6.1.1-01	I05109	VT	N/A	E-A	Accepted
	DRYWELL HEAD	I05110	VT-3	N/A	E-A	Accepted
	DW INT 798'-805'	I05111	VT-3	N/A	E-A	Accepted
	DW INT 776'-798' NW	I05112	VT-3	N/A	E-A	Accepted
	DW INT 742'-757' SE	I05113	VT-3	N/A	E-A	Accepted
	MOIST. BAR 742' SE	I05114	VT-3	N/A	E-D	Accepted
	CRD BOLTS	I05115	VT-1	N/A	E-G	Accepted
Torus	TORUS INT (5,6,7,8) ABOVE WATER LEVEL	I05116	VT-3	N/A	E-A	Accepted
	TORUS EXT (5,6,7,8)	I05122	VT-3	N/A	E-A	Accepted
	TORUS BAYS 1-16	I05123	VT-1	N/A	E-C	Accepted
	DW TO TORUS VENT #E	I05124	VT-3	N/A	E-A	Accepted
	DW TO TORUS VENT #F	I05148	VT-3	N/A	E-A	Accepted

* Credited for Third Period of IWE Plan Interval

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part E, page 1 of 1

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

ADDITIONAL EXAMINATION IDENTIFICATION RECORDS

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

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

SUCCESSIVE EXAMINATION IDENTIFICATION RECORDS

Class 1					
Component Examined	Previous ISI Report Number	ISI Report Number	Examination	ASME XI Category	Results
HCC-B002 (HOLES 20-40)	I01093	I05027	UT	B-A	Acceptable
RRF-F002	I01068	I05047	UT	R-A	Acceptable
CRA-K017AA	I01051	I05015	VT-3	F-A	Acceptable

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part F, page 1 of 3

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

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>
19-03-01	2	SV4334B Containment Atmosphere Dilution N2 Supply Outboard Isolation	CWO A62771	Replaced Main Disc Assembly
19-03-02	1	Spare Main Steam Safety Relief Valve Pilots	PO 19829	Spare Main Steam Safety/Relief Valves were repaired and tested
19-03-05	2	SV4333A Containment Atmosphere Dilution N2 Supply Inboard Isolation	CWO A62941	Replaced Main Disc Assembly
19-03-06	1	Spare Main Steam Safety Relief Valve Pilot	PO 19829	Spare Main Steam Safety/Relief Valve was repaired and tested
19-03-09	2	MO1055 Moisture Separator Reheat Steam Supply	CWO A64131 & CWO A68176	Welded guide slots to improve alignment
19-03-10	2	1P216 & 1P216A High Pressure Coolant Injection Pump	CWO A63477 & CWO A63478	Installed piping supports for seal water piping
19-03-11	2	1P211B Core Spray Pump	MWO 1126361	Replaced pump seal with a design for higher temperatures
19-03-13	2	MO4323A Containment Atmosphere Dilution Supply	CWO A51965	Seal welded bonnet to body
19-03-14	1	PSV4401 Main Steam Relief Valve	PWO 1128061	Pilot Valve S/N 201 was rotated in place of S/N 226
19-05-01	2	CV1064 Main Steam Drain Isolation	CWO A67068	Removed and replaced seal weld on bonnet for valve disassembly
19-05-02	2	1P211A Core Spray Pump	MWO 1126360	Replaced pump seal with a design for higher temperatures
19-05-03	2	1P211B Core Spray Pump	MWO 1130269	Replaced pump seal in order to add a spacer
19-05-04	2	1P229A Residual Heat Removal Pump Torus Suction Line Snubber	PWO 1127332	Replaced snubber DA-53 with snubber DA-250

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part F, page 2 of 3

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

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>
19-05-09	1	Core Spray Dissimilar Metal Pipe Welds	PWO 1129011 & CWO A67445	Ground the crowns from welds CSA-F002 and CSA-F004
19-05-10	1	Reactor Water Cleanup Dissimilar Metal Pipe Weld	CWO A66243 & PWO 1129234	Ground the crown from weld CUB-F004
19-05-11	1	DLA-6-H-8 and DLA-6-SS-13 Residual Heat Removal Piping	MWO 1129050	Replaced bolt, nut, and added the clamp support bars on clamp hanger
19-05-12	1	Control Rod Drives	PWOs 1129089 – 1129095 & CWO A067500	Replaced bolting and control rod drives at 06-23, 10-11, 10-23, 14-07, 14-11, 14-23, 18-31 locations
19-05-13	2	MO2112 'A' Core Spray Test Bypass	MWO A63071	Replaced valve disc
19-05-15	2	XS2618B Standby Liquid Control SQUIB	PWO 1128161	Replaced explosive valve
19-05-16	1	Control Rod Drives	PWOs 1129096 – 1129102 & CWO A067500	Replaced bolting and control rod drives at 22-03, 22-07, 22-11, 22-31, 26-11, 26-31, 30-15 locations
19-05-17	1	Control Rod Drives	PWOs 1129104, 1129105, 129107, 1129114, 1132803 & CWO A067500	Replaced bolting and control rod drives at 30-39, 34-07, 34-39, 34-11, 30-31 locations
19-05-18	2	HCU Accumulators	PWOs 1132908, 1129109, 129108, 1132909, 129110, 1129113 & CWO A65092	Replaced HCU Accumulators at 02-19, 34-23, 10-23, 10-15, 30-39, 14-27, 42-23 locations
19-05-19	2	CV1064 Main Steam Drain Isolation	CWO A54646	Replaced CV1064 with a valve that has a heavier operator, and installed new supports
19-05-20	1	Reactor Recirculation Riser Dissimilar Metal Weld	CWO A64843	Removed weld crown on RRF-F002 weld by Machining
19-05-21	1	Reactor Recirculation Riser Dissimilar Metal Weld	CWO A64844	Removed weld crown on RRG-F002 weld by machining.

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part F, page 3 of 3

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

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>
19-05-22	1	Reactor Recirculation Riser Weld	CWO A66133	Blended arc strike on weld RRD-J005
19-05-23	1	CRD Return Dissimilar metal Weld	PWO 1129048	Ground down weld crown on weld CRA-J032
19-05-25	1	PSV4400 Main Steam Relief Valve	PWO 1128060	Pilot Valve S/N 207 was rotated in place of S/N 218
19-05-26	1	PSV4402 Main Steam Relief Valve	PWO 1128063	Pilot Valve S/N 200 was rotated in place of S/N 189
19-05-27	1	PSV4405 Main Steam Relief Valve	PWO 1128066	Pilot Valve S/N 176 was rotated in place of S/N 141
19-05-28	1	PSV4406 Main Steam Relief Valve	PWO 1128067	Pilot Valve S/N 227 was rotated in place of S/N 203
19-05-29	1	PSV4407 Main Steam Relief Valve	PWO 1128068	Pilot Valve S/N 199 was rotated in place of S/N 202
19-05-30	1	PSV4401 Main Steam Relief Valve	PWO 1128062	Main Valve Body S/N 201 was rotated in place of S/N 141
19-05-31	1	PSV4407 Main Steam Relief Valve	PWO 1128069	Main Valve Body S/N 218 was rotated in place of S/N 202
19-05-32	2	12" HLE014 RHR Test Line	CWO A71357	Replace 18" length section of 12" diameter HLE014
19-05-33	2	18" HLE023 Containment Vent	MWO 1132980	Repaired containment vent piping to allow for containment thermal growth
19-05-34	2	HLE0335 Drywell Cooling Well Water	MWO 1133017	Removed Hanger HLE-35-SR-79 from HLE035 to allow for containment thermal growth

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part G, page 1 of 75

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

Form NIS-2's

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 (Interstate P & L) Date 04/08/04
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 A62771
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Containment Atmosphere Dilution, Class II
5. (a) Applicable Construction Code ASME Section III 19 71 Edition S72 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 (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)
Main Disc Assy	Target Rock	S/N 22	N/A	SV4334B	1987	Replacement	No

7. Description of Work: Replaced Main Disc Assy, P/N 200442-1 in SV4334B on CWO A62771
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: Valve disassembled due to LLRT failure. Main Disc Assy, P/N 200442-1 replaced and valve reassembled. No pressure test required per ASME Repair Replacement Administrative Document Section 5.1.13d.

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 W. Thorne, Jr. TL Equipment Reliability Date 4/9/ 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 5-2-03 to 4-9-04, 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.

JBW Commissions NB 12329 AWF, 1496 EA
Inspector's Signature National Board, State, Province, and Endorsements
Date 4-9, 2004

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 (Interstate P & L Co.) Date 07/14/03
Name
P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2
Address
2. Plant Duane Arnold Energy Center Unit 1
Name
3277 DAEC Road, Palo, IA 52324 PO 19829
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: Spare Main Steam Safety Relief Valve Pilots (Class 1)
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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Pilot Disc	Target Rock	S/N 358	N/A	Spare Pilot (S/N 176)	Unknown	Repair	No
1 st Stage Disc	Target Rock	S/N 15	N/A	Spare Pilot (S/N 176)	Unknown	Repair	No
Preload Spacer	Target Rock	S/N 8	N/A	Spare Pilot (S/N 176)	Unknown	Repair	No
Pilot Disc	Target Rock	S/N 615	N/A	Spare Pilot (S/N 199)	Unknown	Repair	No
2 nd Stage Disc	Target Rock	S/N 50	N/A	Spare Pilot (S/N 199)	Unknown	Repair	No
Preload Spacer	Target Rock	S/N 575	N/A	Spare Pilot (S/N 199)	Unknown	Repair	No
Pilot Disc	Target Rock	S/N 390	N/A	Spare Pilot (S/N 227)	Unknown	Repair	No
2 nd Stage Disc	Target Rock	S/N 16	N/A	Spare Pilot (S/N 227)	Unknown	Repair	No
Preload Spacer	Target Rock	S/N 574	N/A	Spare Pilot (S/N 227)	Unknown	Repair	No
Pilot Disc	Target Rock	S/N 619	N/A	Spare Pilot (S/N 207)	Unknown	Repair	No
2 nd Stage Disc	Target Rock	S/N 73	N/A	Spare Pilot (S/N 207)	Unknown	Repair	No
Preload Spacer	Target Rock	S/N 1037	N/A	Spare Pilot (S/N 201)	1999	Replace	No
Pilot Disc	Target Rock	S/N 625	N/A	Spare Pilot (S/N 201)	1993	Replace	No
2 nd Stage Disc	Target Rock	S/N 536	N/A	Spare Pilot (S/N 201)	1993	Repair	No

7. Description of Work: Spare Main Steam Safety/Relief Valves were repaired and tested at NWS facilities
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐
Other ☐ Pressure * psi Test Temp * °F

*These are spare pilot valves.

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 Valves (S/N's 176, 199, 201, 207, 227) were removed during RFO17 and sent to NWS Tech. for testing And refurbishment. During the refurbishment it was necessary to machine the pilot discs,
- 2nd stage discs and preload spacers for S/N's 176, 199, and 227. The pilot disc and 2nd stage disc were machined on S/N 207.
- PT exams were successfully performed on the machined surfaces for the above discs and spacers. The pilot disc and preload
- spacer were replaced on S/N 201, and preservice VT-3s were performed on the parts prior to shipping the items to NWS. The
- new 2nd stage disc for S/N 201 was machined, and successful PT was performed on the machined surface. The preload spacer
- and the pilot stem were drilled and pinned together for S/N 201. After the above mentioned repairs, all five valve pilots were
- tested and found to have three successive tests that were acceptable.

CERTIFICATE OF COMPLIANCE

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

Repair/Replacement
(repair or replacement)

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Sorenson for Sup. Equipment Reliability Date August 13, 2003
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-10-03 to 8-13-03, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

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

Date 8-13, 2003

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

1. Owners Alliant Energy (Interstate P & L) Date 04/08/04
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 A62941
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Containment Atmosphere Dilution, Class II
5. (a) Applicable Construction Code ASME Section III 19 71 Edition S72 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 (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)
Main Disc Assy	Target Rock	S/N 14	N/A	SV4333A	1999	Replacement	No

7. Description of Work: Replaced Main Disc Assy, P/N 200442-1 in SV4333A on CWO A62941
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: Valve disassembled due to LLRT failure. Main Disc Assy, P/N 200442-1 replaced and valve reassembled. No pressure test required per ASME Repair Replacement Administrative Document Section 5.1.13d.

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 AD Hanson for TL Equipment Reliability Date 4/9/ 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 7-21-03 to 4-9-04, 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.

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

Date 4-9, 2004

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 (Interstate P & L Co.) Date 10/22/03
Name
P. O. Box 351, Cedar Rapids, IA 52406 Sheet 1 of 2
Address
2. Plant Duane Arnold Energy Center Unit 1
Name
3277 DAEC Road, Palo, IA 52324 PO 19829
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: Spare Main Steam Safety Relief Valve Pilot (Class 1)
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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Pilot Disc	Target Rock	S/N 269	N/A	Spare Pilot (S/N 200)	Unknown	Repair	No
2 nd Stage Disc	Target Rock	S/N 85	N/A	Spare Pilot (S/N 200)	Unknown	Repair	No
Pilot Base	Target Rock		N/A	Spare Pilot (S/N 200)	Unknown	Repair	No

7. Description of Work: Spare Main Steam Safety/Relief Valve was repaired and tested at NWS facilities
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐
Other ☐ Pressure * psi Test Temp * °F

*This is spare pilot valve.

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

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

FORM NIS-2 (Back)

9. Remarks: Pilot Valve (S/N 200) was removed during RFO18 and sent to NWS Tech. for testing
And refurbishment. During the refurbishment it was necessary to machine the pilot disc,
2nd stage disc and weld a new seat into the base of the pilot. PT exams were successfully performed on the machined and
welded surfaces.

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 Rumeltown for Sup. Equipment Reliability Date Oct 24, 2003
 Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-14-03 to 10-24-03, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

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

Date 10-24, 2003

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

1. Owners Alliant Energy (Interstate P & L Co.) Date 7/21/05
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 A64131 and CWO A68176
Address Repair Organization to P. O. No., Job No., etc.
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None
Name Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam Line Second Stage Reheat
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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
MO1055	Flowserve Corp.	X00256888	N/A	MSR 1E18A 2 nd Stage Reheat Stm Supply	2001	Repaired	No

7. Description of Work: Welded guide slots to improve alignment. Machined bore to clean up scratches from stem.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 968 Psi Test Temp 552 ° 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: Welded disc guide slots to obtain the proper clearance. Performed visual exam under work order A64131. Successful surface exam was performed on the welded areas of the disc guide slots under work order A68176. Machined bonnet bore to remove rough surfaces caused by stem galling. Machined area of bonnet bore was not accessible for a surface exam. VT-2 of the valve was successfully performed during plant startup (P04004).

MS 7/22/05

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell J. Newfor Sup. Equipment Reliability Date July 22, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 12-2-03 To 7-22-05, 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.

JB
Inspector's Signature

Commissions

NB 12329ANI 1496 FA
National Board, State, Province, and Endorsements

Date 7-22, 2005

FORM NIS-2 (Back)

9. Remarks: Seal lines to 1P216, HPCI main pump and 1P216A, HPCI booster pump were rerouted for easier maintenance. This required two existing cyclone separator supports on 1P216 to be ground off of the pump flange, and two larger supports were welded back onto the pump flange. The welds successfully passed surface exams. Also, welded two supports for cyclone separators on 1P216A pump flange. Those welds successfully passed surface exams. Machined area of pump flange to permit threading of a larger seal flush line fitting into the seal flange. This area was accessible for a surface exam. A PT exam was performed with no indications. Pressure testing was not required since the welding the supports onto the components did not penetrate through the pressure boundary of the components, as described in IWA4710.

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Cleaver Sup. Equipment Reliability Date March 20, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 2-27-04 To 3-21-05, 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.

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

Date 3-21, 2005

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 (Interstate P & L Co.) Date 4/9/04
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 1126361
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: Core Spray
5. (a) Applicable Construction Code ASME Draft P & V 19 68 Edition N/A Addenda N/A Code Case: 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	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Seal Gland	FlowServe	RLSA04765	N/A	1P211B Core Spray Pump	2003	Replacement	No
Seal Gland Cap Screws	Texas Bolt	HT # 90940	N/A	1P211B Core Spray Pump	1995	Replacement	No

7. Description of Work: Replaced pump seal with a design for higher temperatures
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 295 Psi Test Temp 76.9 °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 pump seal with larger seal designed for higher temperature application. Replaced cap screws since new seal is larger, and therefore requires longer cap screws. Successfully performed VT-2 exam after installation.

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Ronald G. Gaudin Sup. Equipment Reliability Date April 13, 2004
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-4-04 To 4-14-04, 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.

JBA
Inspector's Signature

Commissions NB 12329A N.F., 1496 FA
National Board, State, Province, and Endorsements

Date 4-14-04, 2004

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 (Interstate P & L Co.) Date 4/13/04
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 A51965
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Containment Atmosphere Dilution
5. (a) Applicable Construction Code ASME Section III 19 71 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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
MO4323A	Rockwell Edwards	KA034	N/A	A CAD SUPPLY PCV INLET	Unknown	Repaired	No

7. Description of Work: Seal welded bonnet to body and bonnet to motor flange.
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: Disassembled valve bonnet. During re-assembly seal welded bonnet to body and bonnet to the motor flange.
Successful surface exams were performed on both welds.

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell B. Smith Sup. Equipment Reliability Date April 13, 2004
 Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
 of Hartford, Conn. have inspected the components described in this Owner's Report during the period 10-24-03 To 4-14-04, 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.

JB Commissions NB 10329 ANI. 1496 IA
 Inspector's Signature National Board, State, Province, and Endorsements
 Date 4-14-04, 2004

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 03/31/05
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 1128061
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Nuclear Management Co. LLC Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam Safety Relief Valve (Class 1)
5. (a) Applicable Construction Code ASME III 19 68 Edition W68 Addenda N/A Code Case.
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92
6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component (Hanger No.)	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification Work Order / SUS	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Pilot Valve	Target Rock	S/N 201	N/A	PWO 1128061 / 83.04	1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (19-03-02). This Pilot Valve was rotated in place of S/N 226.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 955 psi Test Temp 514 °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 226 was removed and pilot valve S/N 201 was installed. Prior to installation S/N 201 was repaired and documented on NIS-2 (19-03-02). A VT-2 (P03064) 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 Al Thomas Car TL Equipment Reliability Date JULY 18, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-02-04 to 7-18-05, 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.

JSI Commissions NB 12329A~F, 1496 IA
Inspector's Signature National Board, State, Province, and Endorsements
Date 7-18-05, 2005

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 January 10, 2005
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 A67068
Address _____ Repair Organization to P. O. No., Job No., etc. _____
3. Work Performed by Nuclear Management Co. LLC. Type Code Symbol Stamp None
Name _____ Authorization No. None
3277 DAEC Road, Palo, IA 52324 Expiration Date None
4. Identification of System: Main Steam
5. (a) Applicable Construction Code ANSI B31.1 19 67 Edition NA Addenda NA Code Case.
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-92A
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)
CV1064	Anchor Darling	EA748-1	NA	NA	1988	Repaired	No

7. Description of Work: Removed and replaced seal weld on bonnet for valve disassembly
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☐
- Other ☐ Pressure NA* psi Test Temp NA* °F

*Pressure testing seal welds not required in accordance with IWA-4710.

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

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

FORM NIS-2 (Back)

9. Remarks: Valve was disassembled an internal components were replaced. No pressure boundary components were replaced. Valve bonnet requires a seal weld to be removed and installed after disassembly and reassembly. Surface exam was successfully completed on the body to bonnet seal weld. Pressure test was not necessary since IWA-4710 does not require pressure testing seal welds.

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 January 10, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-21-04 to 1-18-05, 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

Commissions NB 123294NE, 1496 IA
National Board, State, Province, and Endorsements

Date 1-18, 2005

FORM NIS-2 (Back)

9. Remarks: Replaced pump seal with larger seal designed for higher temperature application. Replaced cap screws since new seal is larger, and therefore requires longer cap screws. Successfully performed VT-2 exam after installation.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this

Replacement

(repair or replacement)

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

Type Code Symbol Stamp None

Certificate of Authorization No.

None

Expiration Date

N/A

Signed

Pamela Deem for

Sup. Equipment Reliability

Date

January 10,

2005

Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa

and employed by HSB CT

of Hartford, Conn.

have inspected the components described in this Owner's Report during the period 8-18-04 To 1-18-05, 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.

JBV

Inspector's Signature

Commissions

NB 12329ANI, 1496-IA

National Board, State, Province, and Endorsements

Date

1-18

, 2005

(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 pump seal after adding a spacer. Spacer was required to obtain good fit for seal. Old seal was removed because the set screw was jammed, and seal could not be removed without damaging the seal. Successfully performed VT-2 exam after installation of new seal.

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 *Robert J. Duff* Sup. Equipment Reliability Date January 10, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-17-04 To 1-24-05, 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.

JBL
Inspector's Signature

Commissions

NB 12329AN I, 1496-IA
National Board, State, Province, and Endorsements

Date 1-24, 2005

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

FORM NIS-2 (Back)

9. Remarks: Snubber DA-53, located at HBB-024-SS-222, had reached the end of seal life and was replaced with DA-250. This snubber (DA-53) passed the visual and functional tests. The snubber (DA 250) was rebuilt under PWO 1124686. No load bearing parts were repaired or replaced during rebuild. Successfully performed VT-3 exam (Rpt # P05032) after installation of replacement snubber.

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 W J Rans Sup. Equipment Reliability Date 3/16/05 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 12-11-04 To 3-16-05, 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.

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

Date 3-16, 2005

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

1. Owners Alliant Energy (IES Utilities) Date 4/16/2005
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 1129011 and CWO A67445
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: Core Spray Piping
5. (a) Applicable Construction Code ANSI B31.7 Class 1 19 69 Edition 70 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)
DCA-008	Bechtel Corp.	NA	N/A	Core Spray Dissimilar Metal Pipe Welds	1974	Repair	No

7. Description of Work: Ground the crowns from welds CSA-F002 and CSA-F004 to improve UT examination of weld.
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: Ground the crowns from welds CSA-F002 and CSA-F004 to improve UT examination of weld.
Successful surface exam was performed on CSA-F002 (P05055) and on CSA-F004 (P05048) after weld crown
was removed by grinding.

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 [Signature] Supervisor, Materials/Inspection Date April 16, 2005
 Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-21-05 to 4-18-05, 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 12329A-NE 1496 IA
 Inspector's Signature National Board, State, Province, and Endorsements

Date 4-18, 2005

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 5/4/2005
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 A66243 and PWO 1129234
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: Reactor Water Cleanup Piping
5. (a) Applicable Construction Code ANSI B31.7 Class 1 19 69 Edition 70 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)
DCA-014	Bechtel Corp.	NA	N/A	Reactor Water Cleanup Dissimilar Metal Pipe Weld	1974	Repair	No

7. Description of Work: Ground the crown from weld CUB-F004 to improve UT examination of weld.
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: Ground the crown from weld CUB-F004 to improve UT examination of weld. Uncovered porosity under the Crown. Ground out the porosity and verified weld was above minimum wall by using UT. Successful surface exam was performed on CUB-F004 (P05050) after the porosity was removed and after the UT verifying adequate wall thickness was performed.

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell D. Gorman Supervisor, Materials/Inspection Date May 4th 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-4-05 to 5-5-05, 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.

JBL Commissions NB 12329ANI, 1496IA
Inspector's Signature National Board, State, Province, and Endorsements
Date 5-5, 2005

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

1. Owners Alliant Energy (IES Utilities) Date 4/21/2005
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 1129050
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: Residual Heat Removal
5. (a) Applicable Construction Code ANSI B31.7 Class 1 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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
DLA-6-H-8 and DLA-6-SS-13	Nova	NA	N/A	Bolt Ht# 8898297	2005	Replacement	No
DLA-6-H-8 and DLA-6-SS-13	Nova	NA	N/A	Nut Lot #50041551	2005	Replacement	No
DLA-6-H-8 and DLA-6-SS-13	Tuscaloosa Steel	NA	N/A	Ht # A7X3024	1998	Repair	No

7. Description of Work: Replaced one bolt, one nut, and added the clamp support bars on clamp hanger that was reinstalled for supports DLA-6-H-8 and DLA-6-SS-13. Clamp was removed to perform ISI exams on welds.
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 one bolt and nut that were cut to remove the pipe clamp for supports DLA-6-H-8 and DLA-6-SS-13
Pipe clamp was removed to facilitate examining welds next to the clamp. Welded support bars onto the pipe
clamp as depicted on the clamp drawing.
Successful preservice VT-3 exam was performed on the supports (P05004 and P05006).

CERTIFICATE OF COMPLIANCE

We certify that the statements made in the report are correct and this Repair/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 Russell J. Dunfor Supervisor, Materials/Inspection Date April 21, 2005
 Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
 of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-03-04 to 4-22-05, 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.

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

Date 4-22, 2005

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

1. Owners Alliant Energy (IES Utilities) Date 4/30/2005
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 1129089, 1129090, 1129091, 1129092
Address _____ 1129093, 1129094, 1129095 and CWO A067500
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: Control Rod Drive
5. (a) Applicable Construction Code ASME Sect. III 19 68 Edition W68 Addenda N/A Code Case.
Class 1
(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)
IR215(06-23)	GE	S/N 4501			1972	Replacement	Yes
IR215(06-23)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
IR215(10-11)	GE	S/N 2519			1972	Replacement	Yes
IR215(10-11)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
IR215(10-23)	GE	S/N 4494			1972	Replacement	Yes
IR215(10-23)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
IR215(14-07)	GE	S/N A4286			1990	Replacement	Yes
IR215(14-07)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
IR215(14-11)	GE	S/N 3522			1972	Replacement	Yes
IR215(14-11)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
IR215(14-23)	GE	S/N 4467			1973	Replacement	Yes
IR215(14-23)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
IR215(18-31)	GE	S/N 4333			1972	Replacement	Yes
IR215(18-31)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No

7. Description of Work: Replaced bolting and control rod drives at 06-23, 10-11, 10-23, 14-07, 14-11, 14-23, 18-31 loc.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 1025 psi Test Temp 240.6 °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 bolting and control rod drives at 06-23, 10-11, 10-23, 14-07, 14-11, 14-23, 18-31 locations. Successfully performed VT-2 of replaced drives (105001). A VT-1 was successfully completed on all removed bolting. See the individual work orders for each VT-1. A VT-1 was successfully completed for all installed bolting at receiving inspection.

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 Albert Henry for Supervisor, Materials/Inspection Date July 11 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 9-16-04 to 7-11-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

JS Commissions VB 10339ANI 1496 IA
Inspector's Signature National Board, State, Province, and Endorsements
Date 7-11, 2005

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

1. Owners Alliant Energy (IES Utilities) Date 4/30/2005
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 A63071
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: Core Spray
5. (a) Applicable Construction Code P&V Draft Class 2 19 68 Edition _____ Addenda N/A Code Case. _____
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
MO2112	Flowserve	23520-1	N/A	Valve Disc	2005	Replacement	No

7. Description of Work: Replaced valve disc due to poor connection between valve stem and disc on replaced components.
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 valve disc.

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 NoneCertificate of Authorization No. None Expiration Date N/A

Signed Frank Sauer for Supervisor, Materials/Inspection Date April 30 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-29-05 to 5-5-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

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

Date 5-5, 2005

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

1. Owners Alliant Energy (IES Utilities) Date 4/30/2005
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 1128161
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: Standby Liquid Control
5. (a) Applicable Construction Code P&V Draft Class 2 19 68 Edition _____ Addenda N/A Code Case. _____
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
XS2618B	IST Conax Nuclear	608	N/A	Valve	2004	Replacement	No

7. Description of Work: Replaced explosive valve on frequency required by IST Program.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 1245 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 valve. Valve is threaded into place. Successfully performed VT-2 of the valve after installation (P05024).

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Benfor Supervisor, Materials/Inspection Date May 6th, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-10-04 to 5-6-05, 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.

JB Commissions NB 12329 ANI, 1496 JZ
Inspector's Signature National Board, State, Province, and Endorsements
Date 5-6-05, 2005

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 5/2/2005
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 1129096, 1129097, 1129098, 1129099
Address _____ 1129100, 1129101, 1129102 and CWO A067500
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: Control Rod Drive
5. (a) Applicable Construction Code ASME Sect. III 19 68 Edition W68 Addenda N/A Code Case. _____
Class I _____
- (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)
1R215(22-03)	GE	S/N 4407			1972	Replacement	Yes
1R215(22-03)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
1R215(22-07)	GE	S/N 4388			1972	Replacement	Yes
1R215(22-07)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
1R215(22-11)	GE	S/N 4017			1972	Replacement	Yes
1R215(22-11)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
1R215(22-31)	GE	S/N 3965			1972	Replacement	Yes
1R215(22-31)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
1R215(26-11)	GE	S/N 3986			1972	Replacement	Yes
1R215(26-11)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
1R215(26-31)	GE	S/N 4789			1973	Replacement	Yes
1R215(26-31)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
1R215(30-15)	GE	S/N 4350			1972	Replacement	Yes
1R215(30-15)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No

7. Description of Work: Replaced bolting and control rod drives at 22-03, 22-07, 22-11, 22-31, 26-11, 26-31, 30-15 loc.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
- Other ☐ Pressure 1025 psi Test Temp 240.6 ° 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 bolting and control rod drives at 22-03, 22-07, 22-11, 22-31, 26-11, 26-31, 30-15 locations. Successfully performed VT-2 of replaced drives (105001). A VT-1 was successfully completed at receiving inspection for replacement bolting. An Inservice bolting VT-1 inspection was completed on all removed bolting and found satisfactory. See the individual work order for each VT-1.

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 U. J. Lang for Supervisor, Materials/Inspection Date July 11 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-16-04 to 7-11-05, 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.

U. J. Lang Commissions NB 12329 A N E, 1496 I A
Inspector's Signature National Board, State, Province, and Endorsements
Date 7-11, 2005

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 5/2/2005
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 1129104, 1129105, 1129107, 1129114,
Address _____ 1132803 and CWO A067500
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: Control Rod Drive
5. (a) Applicable Construction Code ASME Sect. III 19 68 Edition W68 Addenda N/A Code Case. Class 1
(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)
1R215(30-39)	GE	S/N 4875			1973	Replacement	Yes
1R215(30-39)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
1R215(34-07)	GE	S/N A8883			1990	Replacement	Yes
1R215(34-07)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
1R215(34-39)	GE	S/N 3979			1972	Replacement	Yes
1R215(34-39)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
1R215(34-11)	GE	S/N 4355			1972	Replacement	Yes
1R215(34-11)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No
1R215(30-31)	GE	S/N 3964			1972	Replacement	Yes
1R215(30-31)	Nova	N/A	N/A	8 Bolts Hlt# 8960755	2004	Replacement	No

7. Description of Work: Replaced bolting and control rod drives at 30-39, 34-07, 34-39, 34-11, 30-31 loc.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 1025 psi Test Temp 240.6 °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 bolting and control rod drives at 30-39, 34-07, 34-39, 34-41, 30-31 locations. Successfully performed VT-2 of replaced drives (105001). A VT-1 was successfully completed at receiving inspection for all replacement bolting. An Inservice bolting VT-1 was completed on all removed bolting and found satisfactory with one exception. 105141 on PWO 1129105 found one bolt with damage to two threads from handling damage.

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 W J Brown for Supervisor, Materials/Inspection Date JULY 11 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 9-23-04 to 7-11-05, 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.

JBL Commissions NB 12329 AND 14965A
Inspector's Signature National Board, State, Province, and Endorsements
Date 7-11, 2005

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 5/2/2005
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 PWOs 1132908, 1129109, 1129108, 1132909,
Address 1129110, 1129113 and CWO A067500, A65092
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: Control Rod Drive
5. (a) Applicable Construction Code ASME Sect. VIII 19 68 Edition Addenda N/A Code Case.
(b) Applicable Edition of Section XI Utilized for Repairs or Replacements 1992-A92

6. Identification of Components Repaired or Replaced and Replacement Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
1S220 (02-19)	GE	S/N C0101		HCU Accumulator	1978	Replacement	Yes
1S220 (34-23)	GE	S/N C0079		HCU Accumulator	1978	Replacement	Yes
1S220 (10-23)	GE	S/N A2573		HCU Accumulator	1978	Replacement	Yes
1S220 (10-15)	GE	S/N A2547		HCU Accumulator	1978	Replacement	Yes
1S220 (30-39)	GE	S/N C0089		HCU Accumulator	1978	Replacement	Yes
1S220 (14-27)	GE	S/N C0078		HCU Accumulator	1978	Replacement	Yes
1S220 (42-23)	GE	S/N C0100		HCU Accumulator	1978	Replacement	Yes

7. Description of Work: Replaced HCU Accumulators at 02-19, 34-23, 10-23, 10-15, 30-39, 14-27, 42-23 locations
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 1025 psi Test Temp 240.6 °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 HCU Accumulators at 02-19, 34-23, 10-23, 10-15, 30-39, 14-27, 42-23 locations. Successfully performed VT-2 of replaced HCU accumulators (105001).

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell J. Gurnea Supervisor, Materials/Inspection Date May 6th 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 7-6-04 to 6-14-05, 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.

JB Commissions NB 12329A NJ 1496 IA
Inspector's Signature National Board, State, Province, and Endorsements

Date 6-14, 2005

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 5/25/2005
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 A54646
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 Line Drain
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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
CV1064	Flowserve	S/N 29AXD	N/A	Main Steam Drain to Condenser Isolation Valve	2004	Replacement	No
EBD002	Vision Metals	HT# 151234	N/A	Piping to CV1064	1999	Replacement	No
EBD002	Gulf States Steel	HT# 7462666	N/A	1/4" Plate Steel for CV1064 Support	1998	Replacement	No
EBD002	Lukens Steel	HT# R2958	N/A	5/8" Plate Steel for CV1064 Support	1991	Replacement	No
EBD002	Independence Tube Corp	HT# D42964	N/A	Tube Steel for CV1064 Support	2002	Replacement	No
EBD002	Bergen-Power	283	N/A	U-Bolts	2004	Replacement	No

7. Description of Work: Replaced CV1064 with a valve that has a heavier operator, and installed new supports for the operator.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
- Other ☐ Pressure 968* psi Test Temp 552* °F

*Performed in accordance with Code Case N416-1

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 CV1064. Welded in Valve and a pipe pup piece to fit valve into system. Successfully surface examined piping welds. Built additional supports from the flat plate and u-bolts to support the heavier valve and operator. Successfully performed VT-2 of piping welds and of the replaced valve (Report P05025 performed on Report I05102).

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed *Russell J. G. [Signature]* Supervisor, Materials/Inspection Date May 27, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-2-04 to 5-27-05, 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.

JBL [Signature] Commissions NB 13339ANE, 1496IA
Inspector's Signature National Board, State, Province, and Endorsements

Date 5-27, 2005

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 5/26/2005
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 A64843
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: Reactor Recirculation
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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Recirculation Piping	GE	N/A	N/A	Reactor Recirculation Riser Dissimilar Metal Weld	Unknown	Repaired	No

7. Description of Work: Removed weld crown on RRF-F002 weld by Machining.
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 weld crown from Recirculation Riser safe-end dissimilar metal weld RRF-F002 by machining. Weld crown was removed to improve the ultrasonic examination of the weld. Successful surface exam was completed on weld (P05019) after machining was completed.

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] Supervisor, Materials/Inspection Date May 26, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-6-04 to 5-26-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[Signature] Commissions NB 12329ANI, 1496 IF
Inspector's Signature National Board, State, Province, and Endorsements
Date 5-26, 2005

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 5/26/2005
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 A64844
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: Reactor Recirculation
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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Recirculation Piping	GE	N/A	N/A	Reactor Recirculation Riser Dissimilar Metal Weld	Unknown	Repaired	No

7. Description of Work: Removed weld crown on RRG-F002 weld by machining.
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 weld crown from Recirculation Riser safe-end dissimilar metal weld RRG-F002 by machining. Weld crown was removed to improve the ultrasonic examination of the weld. Successful surface exam was completed on weld (P05020) after machining was completed.

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 *Pamela Dewar* Supervisor, Materials/Inspection Date May 26, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-6-04 to 5-26-05, 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.

BL
Inspector's Signature

Commissions

NS 12324 AVE, 1496 IA
National Board, State, Province, and Endorsements

Date 5-26, 2005

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 5/26/2005
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 A66133
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: Reactor Recirculation
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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
Recirculation Piping	GE	N/A	N/A	Reactor Recirculation Riser Weld	Unknown	Repaired	No

7. Description of Work: Blended arc strike on weld RRD-J005.
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: Blended arc strike on Recirculation Riser weld RRD-J005. Successful surface exam was completed on weld (P05054) after grinding was completed.

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 Rumel Sanford Supervisor, Materials/Inspection Date May 26, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-11-05 to 5-26-05, 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.

JBL
Inspector's Signature

Commissions

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

Date 5-26, 2005

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 5/26/2005
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 1129048
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: Control Rod Drive
5. (a) Applicable Construction Code ANSI B31.7 19 69 Edition 70 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)
Control Rod Drive Return	Bechtel	N/A	N/A	CRD Return Dissimilar metal Weld	1974	Repaired	No

7. Description of Work: Ground down weld crown on weld CRA-J032.
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: Ground down weld crown on CRD Return weld CRA-J032. Successful surface exam was completed on weld after grinding was completed.

CERTIFICATE OF COMPLIANCE

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

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell Sewer Supervisor, Materials/Inspection Date May 26, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 3-31-05 to 5-26-05, 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.

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

Date 5-26, 2005

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 05/27/05
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 1128060
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 207	N/A	Work Order / SUS PWO 1128060 / 83.04	1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (19-03-02). This Pilot Valve was rotated in place of S/N 218.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 1020 psi Test Temp 240 °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 218 was removed and pilot valve S/N 207 was installed. Prior to installation S/N 207 was repaired and documented on NIS-2 (19-03-02). A VT-2 (105001) 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 U. Thomas for GL Equipment Monitoring Date JUNE 7 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT.
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 9-1-04 to 6-10-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

JS Commissions NB 12329ANE, 1486IA
Inspector's Signature National Board, State, Province, and Endorsements
Date 6-10, 2005

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 05/27/05
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 1128063
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 1128063 / 83.04	1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (19-03-06). This Pilot Valve was rotated in place of S/N 189.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 1020 psi Test Temp 240 ° 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 (19-03-06). A VT-2 (105001) 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 Al Thomas GL Equipment Monitoring Date JAN 2 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT.
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 9-1-04 to 6-10-05, 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.

JB Commissions NB 17329 AVE, 1496 IA
Inspector's Signature National Board, State, Province, and Endorsements

Date 6-10, 2005

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 06/7/05
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 1128066
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 176	N/A	PWO 1128066 / 83.04	1976	Replacement	Yes
Body to Pilot Bolt	Nova Machine	Item # 107 Ht # 66923	N/A	PWO 1128066 / 83.04	1996	Replacement	No
Body to Pilot Nut	Target Rock	Item # 150 Ht # IN 85326	N/A	PWO 1128066 / 83.04	1991	Replacement	No

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (19-03-02). This Pilot Valve was rotated in place of S/N 141. During removal of S/N 141, two bolts / one nut required replacement.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 1020 psi Test Temp 240 °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 (19-03-02). During removal of S/N 141, two bolts, one nut was galled and required replacement. A VT-1 was performed as part of the receipt inspections. A VT-2 (105001) 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 W J Row for GL Equipment Monitoring Date JUNE 20, 2005
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 IISB CT.
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 9-1-04 to 6-20-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

W J Row Commissions NB 12329425, 1996 IA
Inspector's Signature National Board, State, Province, and Endorsements

Date 6-20, 2005

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 06/7/05
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 1128067
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 227	N/A	PWO 1128067 / 83.04	1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (19-03-02). This Pilot Valve was rotated in place of S/N 203.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 1020 psi Test Temp 240 °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 203 was removed and pilot valve S/N 227 was installed. Prior to installation, S/N 227 was repaired and documented on NIS-2 (19-03-02). A VT-2 (I05001) 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 W. P. Shaw for GL Equipment Monitoring Date JUNE 7, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT.
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 9-1-04 to 6-10-05, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owner's Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

W. P. Shaw Commissions NB 12329ANI, 1496 IA
Inspector's Signature National Board, State, Province, and Endorsements
Date 6-10, 2005

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 06/23/05
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 1128068
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 I)
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 199	N/A	Work Order / SUS PWO 1128068 / 83.04	1976	Replacement	Yes

7. Description of Work: The Pilot Valve was repaired and documented on NIS-2 (19-03-02). This Pilot Valve was rotated in place of S/N 202.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 1020 psi Test Temp 240 °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 (19-03-02). A VI-2 (105001) 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 A. J. Long Gl. Equipment Monitoring Date June 24 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT.
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 9-1-04 to 6-24-05, 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.

JBV Commissions NB 12379WI 1496 ID
Inspector's Signature National Board, State, Province, and Endorsements
Date 6-24, 2005

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 06/23/05
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 1128062
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)
Main Valve Body	Target Rock	S/N 201	N/A	PSV 4401	1976	Replacement	Yes

7. Description of Work: Main Valve Body S/N 201 was repaired and documented on NIS-2 (17-00-01). This Main Valve Body was rotated in place of S/N 141.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 955 psi Test Temp 514 °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. Main Valve Body S/N 111 was removed and Main Valve Body S/N 201 was installed. Prior to installation, S/N 201 was repaired and documented on NIS-2 (17-00-01). A VT-2 (P03064) 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 Al Thoro for GL Equipment Monitoring Date June 23 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-5-04 to 6-24-05, 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.

BSL Commissions NB 12327ANE, 1496 IA
Inspector's Signature National Board, State, Province, and Endorsements
Date 6-24, 2005

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 06/23/05
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 1128069
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)
Main Valve Body	Target Rock	S/N 218	N/A	PSV 4407	1974	Replacement	Yes

7. Description of Work: Main Valve Body S/N 218 was repaired and documented on NIS-2 (15-97-12). This Main Valve Body was rotated in place of S/N 202.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 1020 psi Test Temp 240.6 °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: Main Valve Body S/N 202 was removed and Main Valve Body S/N 218 was installed. Prior to installation, S/N 201 was repaired and documented on NIS-2 (15-97-12). A VT-2 (105001) 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 W. Thomas Gl. Equipment Monitoring Date JUNE 24, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT.
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 11-6-04 to 6-24-05, 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.

JB Commissions NB 1339, 1496 EA
Inspector's Signature National Board, State, Province, and Endorsements

Date 6-24, 2005

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 06/24/05
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 A71357
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: Residual Heat Removal (Class 2)
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 (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)
Residual Heat Removal Piping	Dubose National Energy	HT # 24353	N/A	12" HLE-014 downstream of MO2007	2005	Replacement	No

7. Description of Work: Replace 18" length section of 12" diameter HLE-014 downstream of MO2007. Applied Code Case N416-1.

8. Tests Conducted: Hydrostatic ☐ Pneumatic ☐ Nominal Operating Pressure ☒
Other ☐ Pressure 177 psi Test Temp 78 ° 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: A 18" long section of 12" diameter HLE-014 was replaced on CWO A71357 due to localized thinning from cavitation erosion. Hangar HLE-014-01H was removed and reinstalled due to interference. A VT-3 exam was successfully performed to document proper installation. The welds were radiographed and accepted after one repair. A baseline UT exam was successfully completed on EC05072. A VT-2 exam (P05049) 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 W. P. Long GL Equipment Monitoring Date JUNE 24, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT.
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-8-05 to 6-24-05, 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.

JB Commissions NB 12329A-F, 1496 IF.
Inspector's Signature National Board, State, Province, and Endorsements

Date 6-24, 2005

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 7/21/2005
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 1132980
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 Control
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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
2" Bypass piping on HLE-23	Bechtel	N/A	N/A	Removed and rerouted 2" Bypass piping on HLE-23	Unknown	Repaired	No
2" Bypass piping on HLE-23	Ladish	Hlt # YG2K	N/A	2" tee installed as part of the rerouting.	1973	Replaced	No
HLE-23-SS-47	Bergen Power	251 HSSA/3K	N/A	Piston Rod Connector	1992	Replacement	No
HLE-23-SS-47	Bergen Power	DA-064	N/A	Snubber	Unknown	Replacement	No
HLE-23-SS-47	Bergen Power	2510	N/A	End Cap Assembly	2005	Replacement	No
2" Bypass piping on HLE-23	ALRO Steel	Hlt# D22186	N/A	U-Bolt from rod stock	1999	Replacement	No
2" Bypass piping on HLE-23	Dubose NES	Hlt# 2Z151	N/A	Nuts for attaching U bolt	2003	Replacement	No

7. Description of Work: Removed part of 2" bypass, and modified supports on Drywell purge piping to allow thermal growth of the containment.
8. Tests Conducted: Hydrostatic ☐ Pneumatic ☒ Nominal Operating Pressure ☐
Other ☐ Pressure 68.5 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: This work order reconfigured the bypass line around the Drywell purge line including a support change, and changed a support on the Drywell purge line. The current support design did not account for containment thermal growth. The bypass line run was cut out and welded, with one elbow added. Surface exams were successfully performed on the welds. A support on the 2" bypass line was modified, a new u-bolt was installed that allowed for thermal movement. The new welds and fitting were pneumatically pressure tested successfully (P05053) A snubber (previously installed under PWO1131078) was installed on the Drywell purge line. Successful VT-3 was performed (P05052) after the new supports were installed.

CERTIFICATE OF COMPLIANCE

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

Repair/Replacement
(repair or replacement)

Type Code Symbol Stamp None

Certificate of Authorization No. None Expiration Date N/A

Signed Russell DeWitt Supervisor, Materials/Inspection Date July 21, 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-11-05 to 7-22-05, 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.

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

Date 7-22, 2005

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 7/25/2005
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 1133017
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
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	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (YES or NO)
HLE-035	Bechtel	N/A	N/A	Piping outside X-24B penetration	Unknown	Repaired	No

7. Description of Work: Removed Hanger HLE-35-SR-79 from line HLE-035 to allow for drywell thermal growth.
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: This work order removed hanger HLE-35-SR-79 from the HLE 35 line near penetration X-24B. The hanger was removed to allow thermal growth of the drywell per ECP1715.

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 *Frank D. Smith* Supervisor, Materials/Inspection Date July 25 2005
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSB CT
of Hartford, Conn. have inspected the components described in this Owner's Report during the period 4-19-05 to 7-25-05, 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.

JBL Commissions NB 17329 AN I, 1496 FA
Inspector's Signature National Board, State, Province, and Endorsements
Date 7-25, 2005

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part H, page 1 of 1

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

ABSTRACT OF CONDITIONS NOTED AND CORRECTIVE MEASURES TAKEN:

The corrective measures are addressed in this report and were performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 1992 with the 1992 Addenda (Ref. Relief Request NDE-R015 Rev. 1), and the Duane Arnold Energy Center Updated Final Safety Analysis Report. The corrective measures performed as Repairs or Replacements are listed in Part F of this report and are documented, using Form NIS-2, in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section XI, 1992, 1992 Addenda. Specific details and associated records of additional corrective measures are on file at Duane Arnold Energy Center. The corrective measures addressed were performed during the period of April 21, 2003 through May 3, 2005.

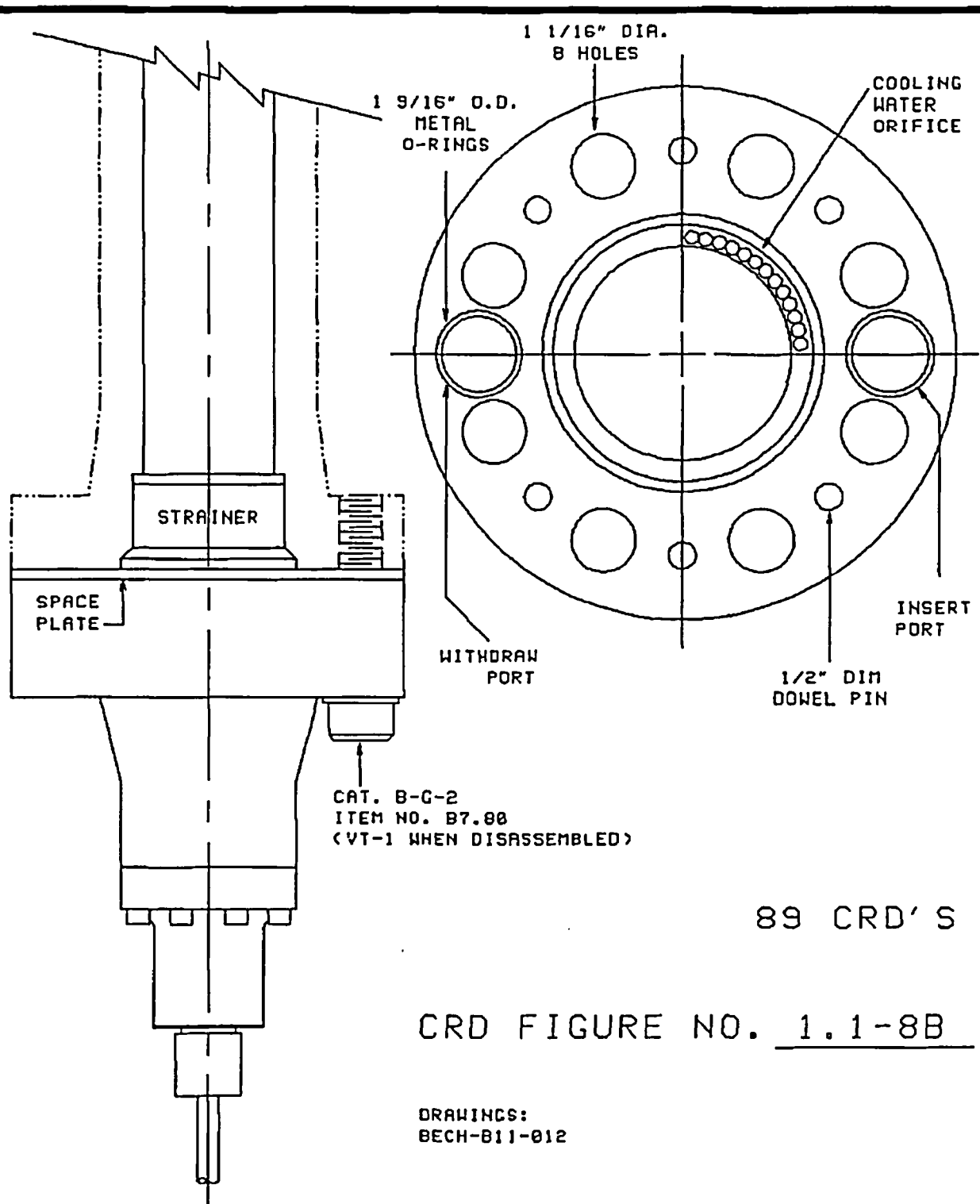
**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part I, page 1 of 41

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

ISI FIGURES AND ISOMETRICS

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



89 CRD' S

CRD FIGURE NO. 1.1-8B

DRAWINGS:
BECH-811-012

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	9-24-90	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	ISO'S TO CAD FORMAT AS PER HG-89-0794

DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC

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

SECTION A-A

PLAN VIEW

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

Inservice Inspection Program Reactor Pressure Vessel Sketch

TOP HEAD
ASSEMBLY

DWG. NO.

VS-01-06

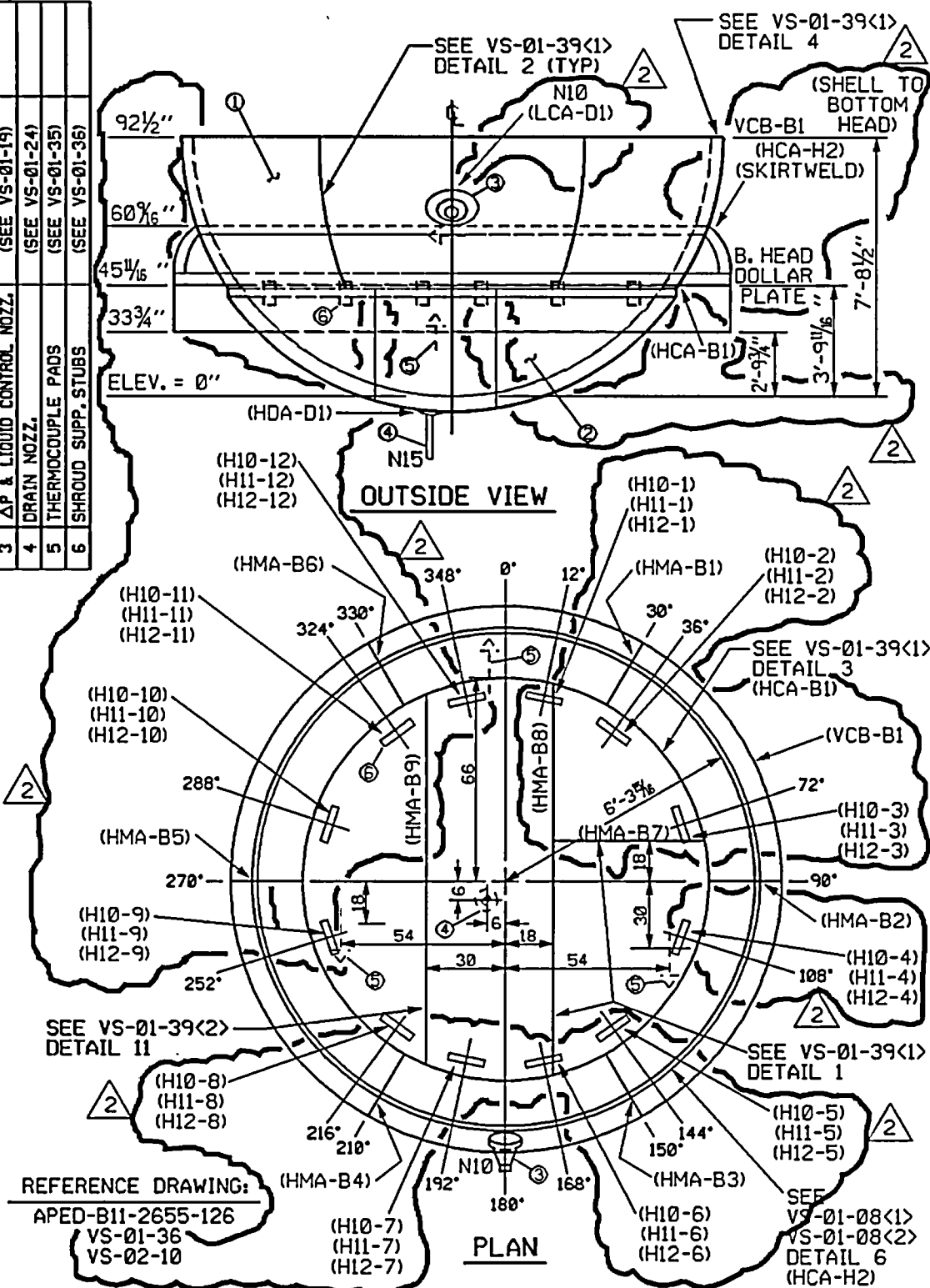
REV.
3

NO.	DESCRIPTION	BILL OF MATL.	PROCD.
1	SIDE PLATE	SA533 CLASS 1 GR.B	
2	DOLLAR PLATE	SA533 CLASS 1 GR.B	
3	AP & LIQUID CONTROL NOZZ.	(SEE VS-01-19)	
4	DRAIN NOZZ.	(SEE VS-01-24)	
5	THERMOCOUPLE PADS	(SEE VS-01-35)	
6	SHROUD SUPP. STUBS	(SEE VS-01-36)	

NO.	DATE	REVISED PER DURE-0011	REVISION	DA	GD	SS	SS	GP	SS	VER.
1	12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM								
2	8/8/95	REVISED PER DURE-0011								

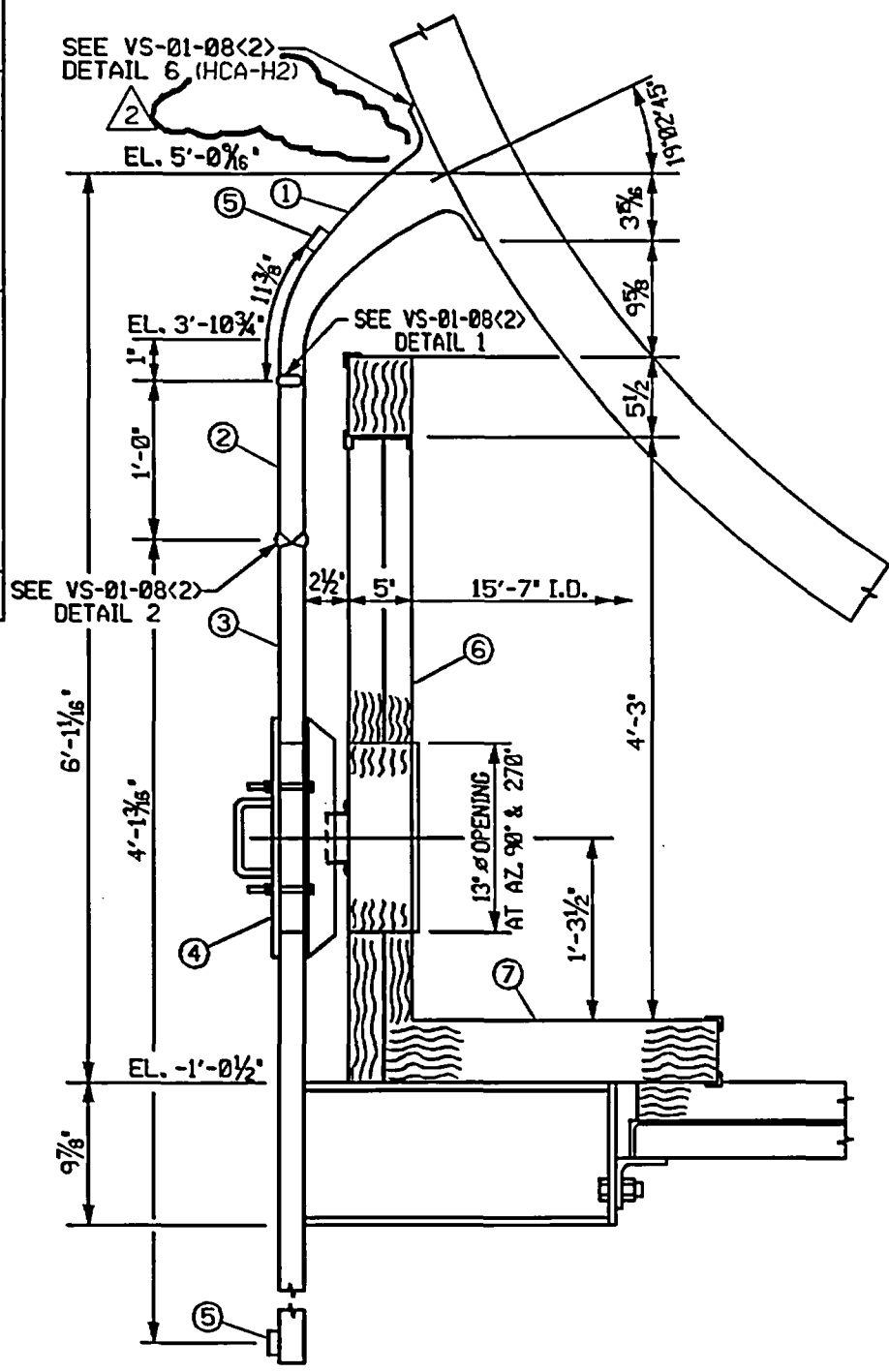
IES:
Inservice Inspection Program
Reactor Pressure Vessel Sketch

BOTTOM HEAD ASSEMBLY
 DWG. NO. VS-01-07
 REV. 2



NO.	DESCRIPTION	BILL OF MATL.	PROCD.
1	KNUCKLE	SA533 CLASS 1 OR B	
2	KNUCKLE EXTENSION	SA516 GR.70	
3	SKIRT EXTENSION	SA516 GR.70	
4	MANHOLE	(SEE VS-01-09)	
5	THERMOCOUPLE PADS	(SEE VS-01-35)	
6	INSULATION		
7	WALKING SURFACE		

NO.	DATE	REVISION	REV.
1	8/8/95	REVISED PER DURE-0011	SS
2	12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	GP
3			SS

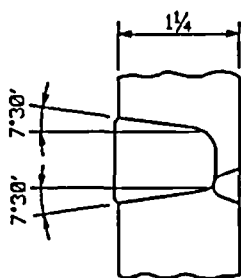


REFERENCE DRAWINGS:
 APED-B11-2655-127, APED-B11-3160-010,
 APED-B11-3160-013

IES:
 Inservice Inspection Program
 Reactor Pressure Vessel Sketch

**SKIRT KNUCKLE &
 SKIRT EXTENSION**
 DWG. NO. VS-01-08<1>

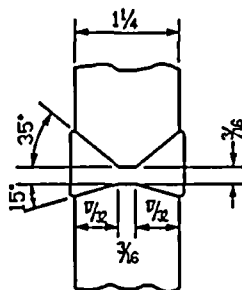
REV.
 2



DETAIL 1

SKIRT KNUCKLE TO SKIRT
KNUCKLE EXTENSION

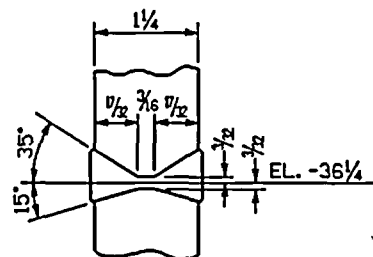
(WELD PER WPS-325-2F4F6)



DETAIL 2

SKIRT EXTENSION
GIRTH SEAM

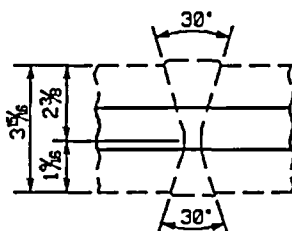
(WELD PER WPS-301-1F4)



DETAIL 3

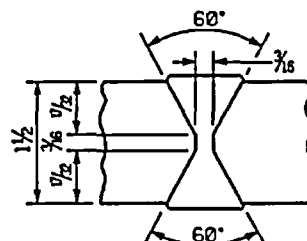
SKIRT EXTENSION TO
SUPPORT SKIRT

(WELD PER WPS-301-2F4)



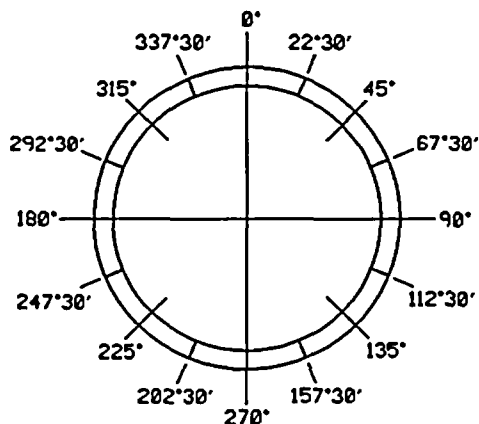
DETAIL 4

SKIRT KNUCKLE VERT SEAMS
(WELD PER WPS-303-1F4)



DETAIL 5

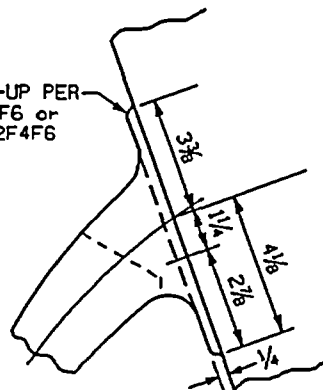
SKIRT EXTENSION VERT SEAMS
(WELD PER WPS-301-1F4)



SEAM ORIENTATION
SKIRT KNUCKLE & SKIRT EXTENSION

REFERENCE DRAWING:
APED-B11-2655-127

WELD BUILD-UP PER
WPS-323-1F6 or
WPS-323-2F4F6



DETAIL 6

DETAIL OF SKIRT KNUCKLE TO
BOTTOM HEAD JUNCTION

(WELD PER WPS-323-2F4F6 or
WPS-343-1F4F6)

DRAFTED FOR VESSEL INSPECTION PROGRAM
REVISION

NO. DATE

IES:

Inservice Inspection Program
Reactor Pressure Vessel Sketch

SKIRT KNUCKLE &
SKIRT EXTENSION

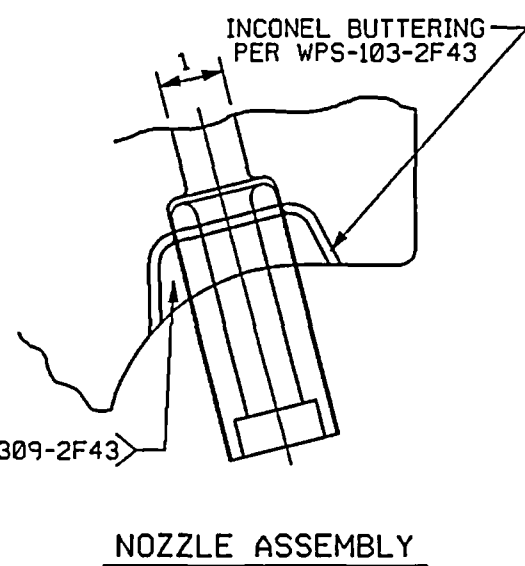
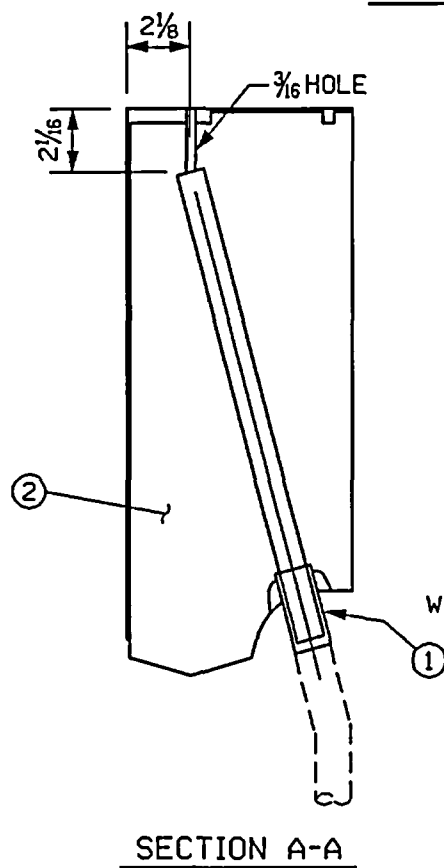
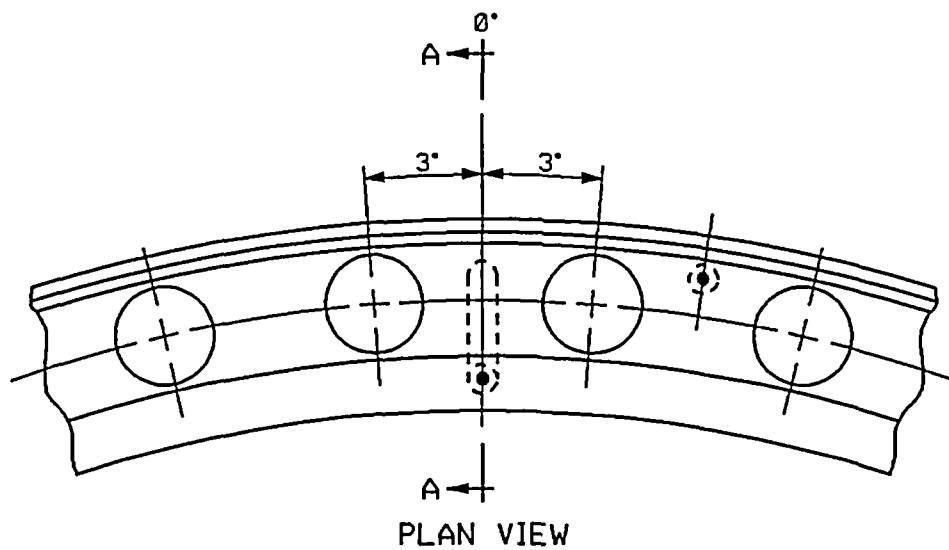
DWG. NO.

VS-01-08<2>

REV.
1

NO.	DESCRIPTION	BILL OF MAT'L.	PROCD.
1	COUPLING	SB-166	
2	SHELL CLOSURE FLANGE	AS08 CLASS 2	

NO.	DATE	REVISION	MS	DF	GP	SS
1	12-08-94	DRAFTED FOR VESSEL INSPECTION PROGRAM				
			DRAFT	CHKD	ENGR	VER.



REFERENCE DRAWING:
APED-B11-2655-195

IES:
Inservice Inspection Program
Reactor Pressure Vessel Sketch

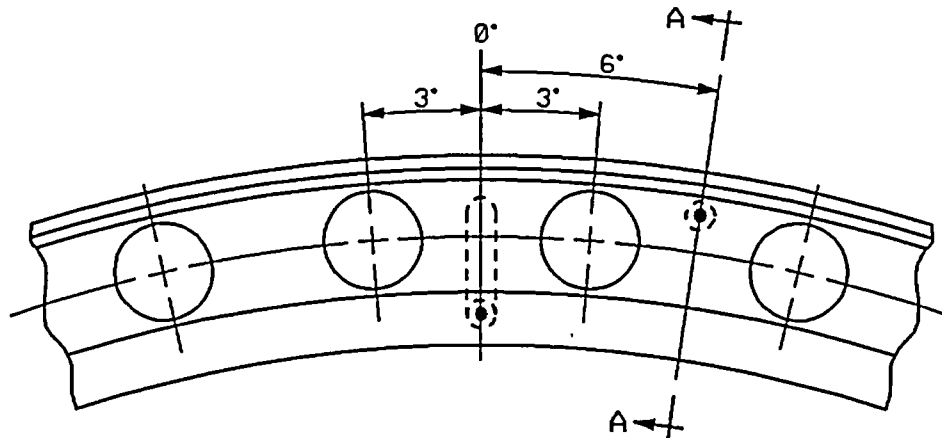
HP SEAL LEAK DETECTOR
NOZZLE MK N13

DWG. NO. VS-01-22

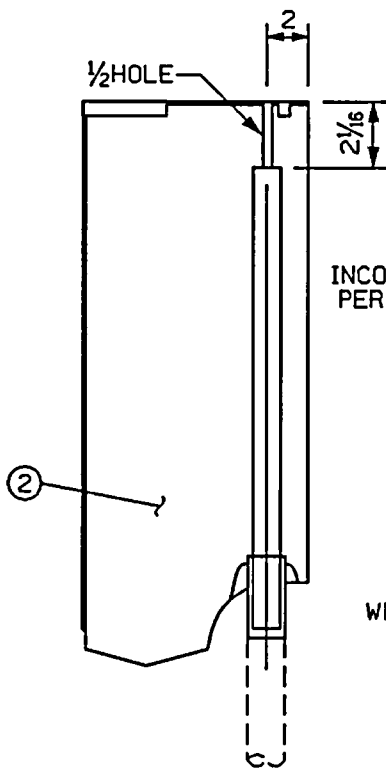
REV. 1

NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	COUPLING	SB-166	
2	SHELL CLOSURE FLANGE	A508 CLASS 2	

NO.	DATE	REVISION	MS	DF	GP	SS	VER.
1	12-08-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	DR	TR	CHKD	ENGR.	



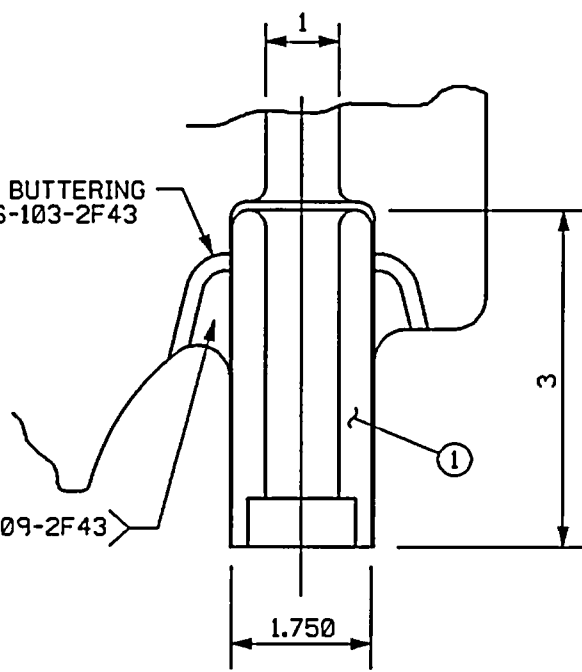
PLAN VIEW



SECTION A-A

INCONEL BUTTERING
PER WPS-103-2F43

WPS-309-2F43



NOZZLE ASSEMBLY

REFERENCE DRAWING:
APED-B11-2655-195

IES:
Inservice Inspection Program
Reactor Pressure Vessel Sketch

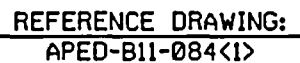
LP SEAL LEAK DETECTOR
NOZZLE MK N14

DWG. NO.

VS-01-23

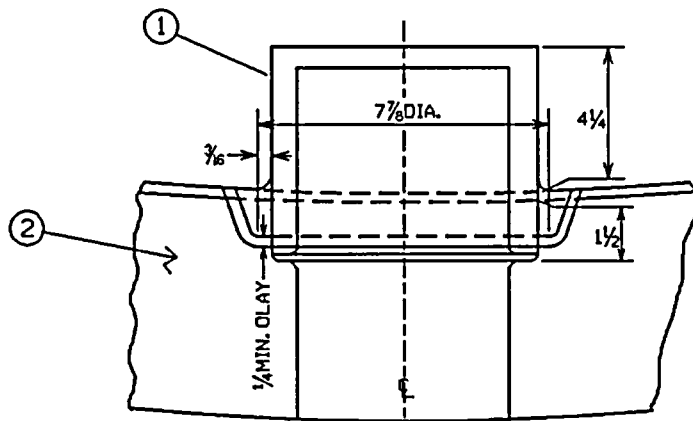
REV.

1

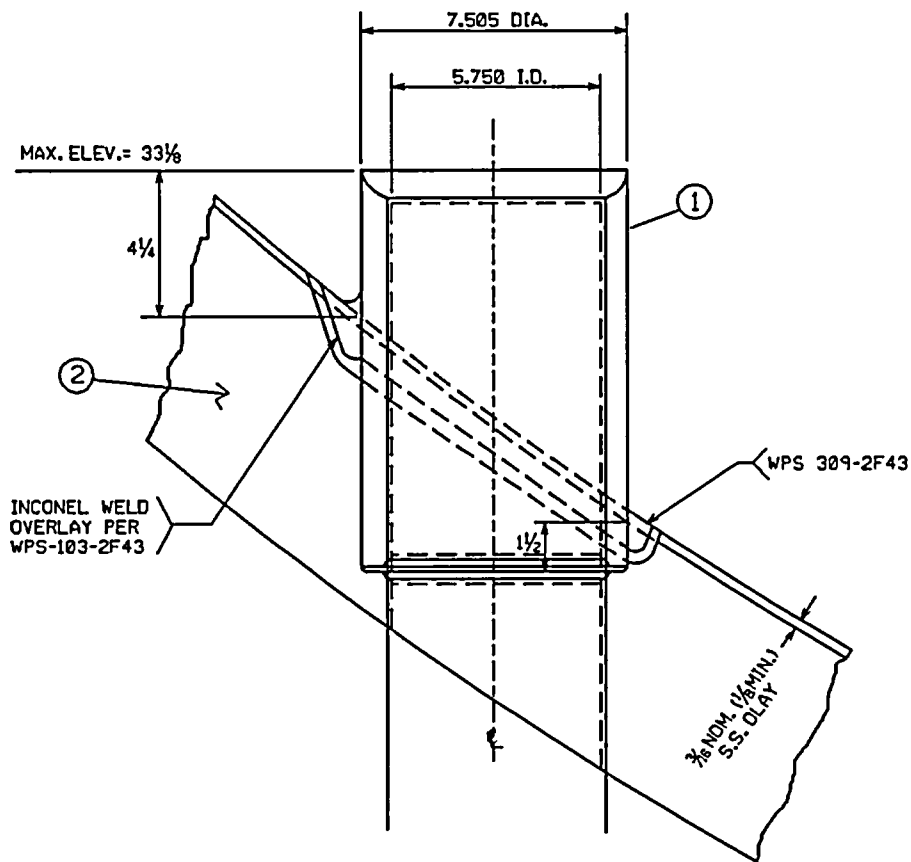
[illegible]

REV.
1

NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	STUB TUBE	SB-167	
2	BOTTOM HEAD	SA533 CLASS 1 GR.B	



CENTER CRD STUB ASSEMBLY



TYPICAL CRD STUB ASSEMBLY

REFERENCE DRAWINGS:
APED-B11-2655-189,
APED-B11-001<2>

NOTE: ALL STUB TUBES SHALL EXTEND A MINIMUM OF 4 1/4" ABOVE THE INNER SURFACE OF THE BOTTOM HEAD AND A MINIMUM OF 1 1/2" BELOW THE INNER SURFACE OF THE BOTTOM HEAD.

12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP	SS
NO.	DATE	REVISION	NO.	DATE	REVISION
1	12-09-94	1			
IES: Inservice Inspection Program Reactor Pressure Vessel Sketch			CRD STUB TUBE		
DWG. NO.			VS-12-02		
			REV. 1		

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

NO.	DESCRIPTION	BILL OF MATL.	PROCD.
1	SHIELD TUBE		
2	O-RING		
3	GLAND	304 SS	
4	PIPE, SEAL END (3/4" SCH.40)	316 SS	
5	COUPLING	304 SS	
6	PIPE, TRANSITION END (3/4" SCH.40)	316 SS	
7	GUIDE RING	304 SS	
8	TUBE	304 SS	
9	END PLUG	304L SS	
10	PLUNGER HOUSING		
11	PLUNGER		

REFERENCE DRAWINGS:

APED-B11-042<01>, APED-B11-042<02>,
APED-B11-042<08>, APED-B11-042<09>

IES:

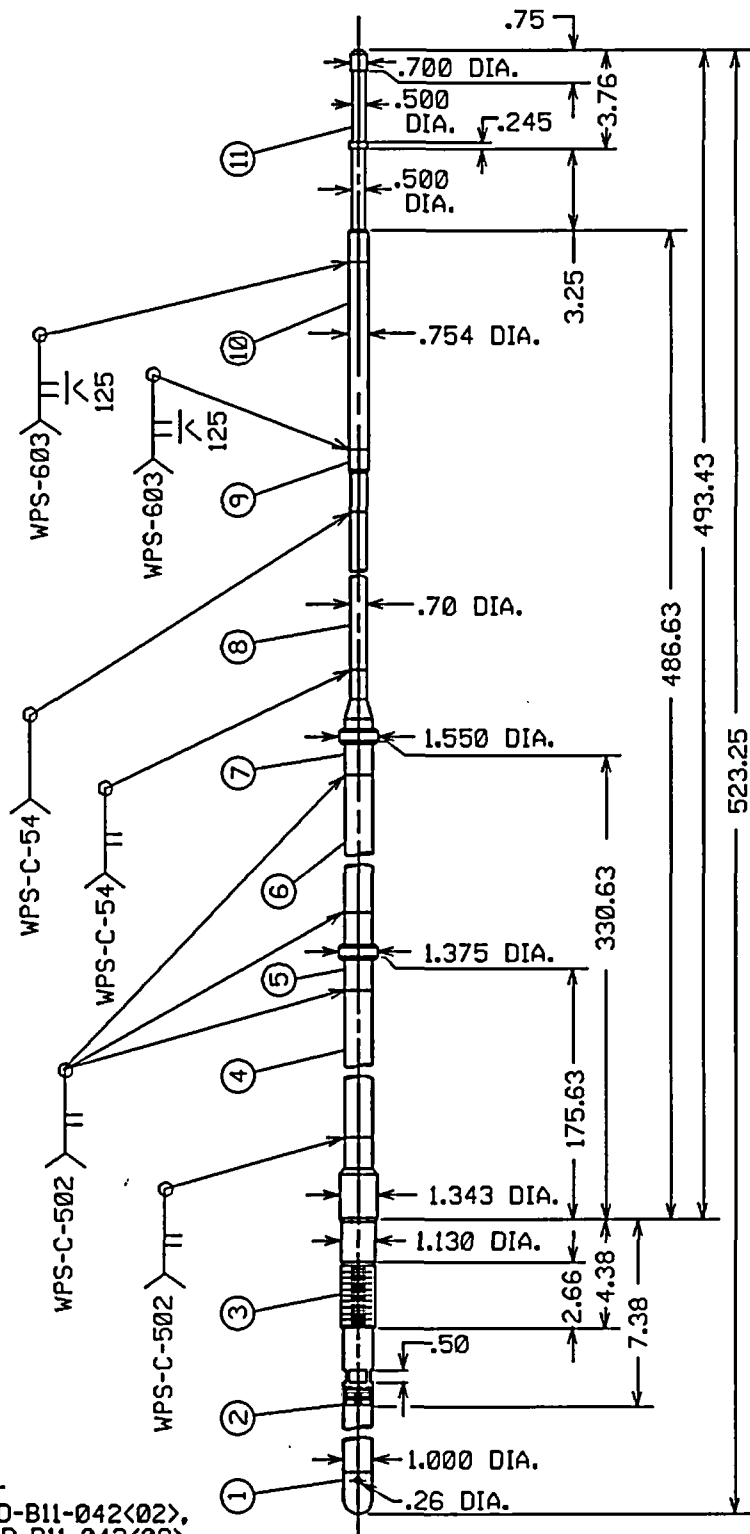
Inservice Inspection Program
Reactor Pressure Vessel Sketch

DWG. NO.

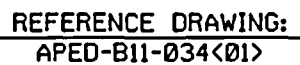
DRY TUBE

VS-13-02

REV.
1



	/	NO.	DATE	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP	SS
	/			REVISION	DRFTR (CHKD)	ENGR	VER.	



REV.
1

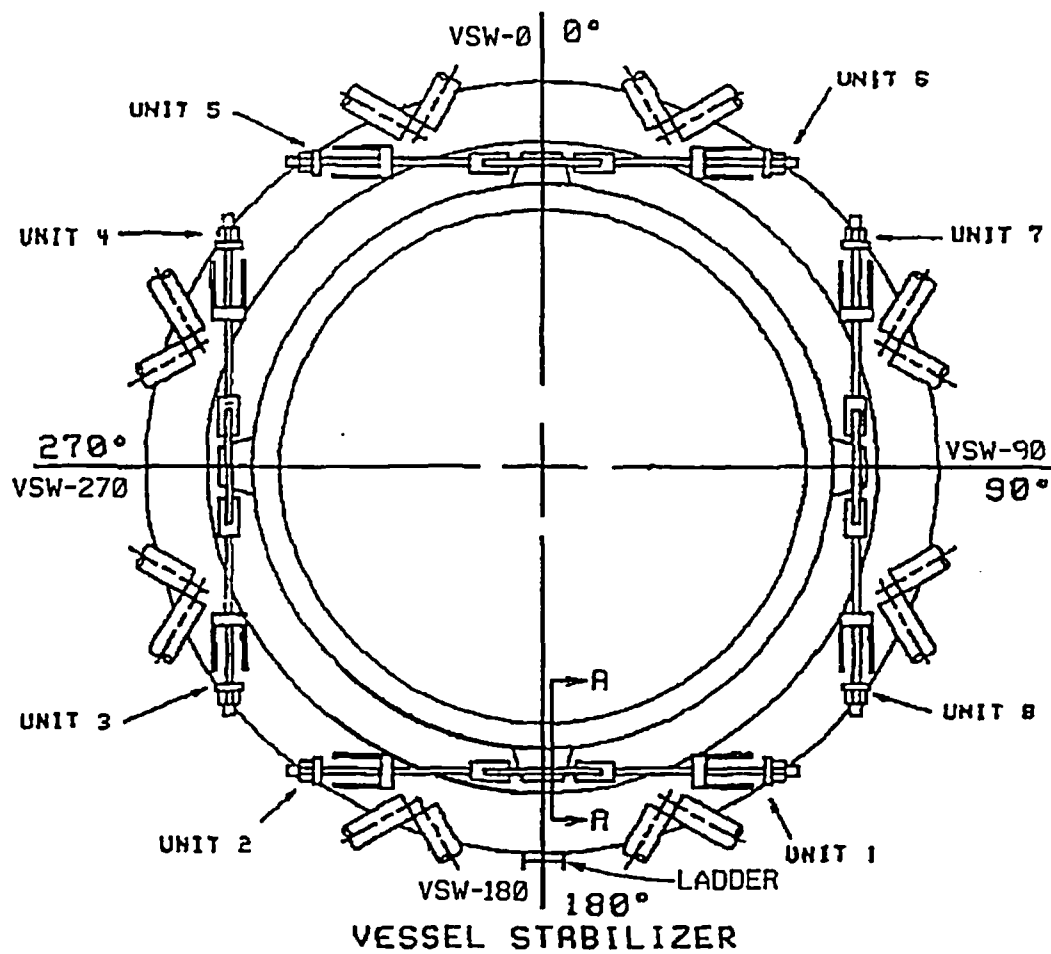
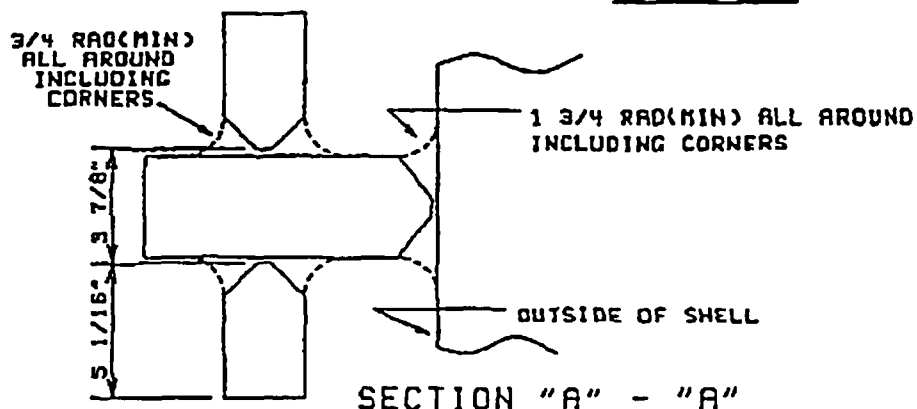
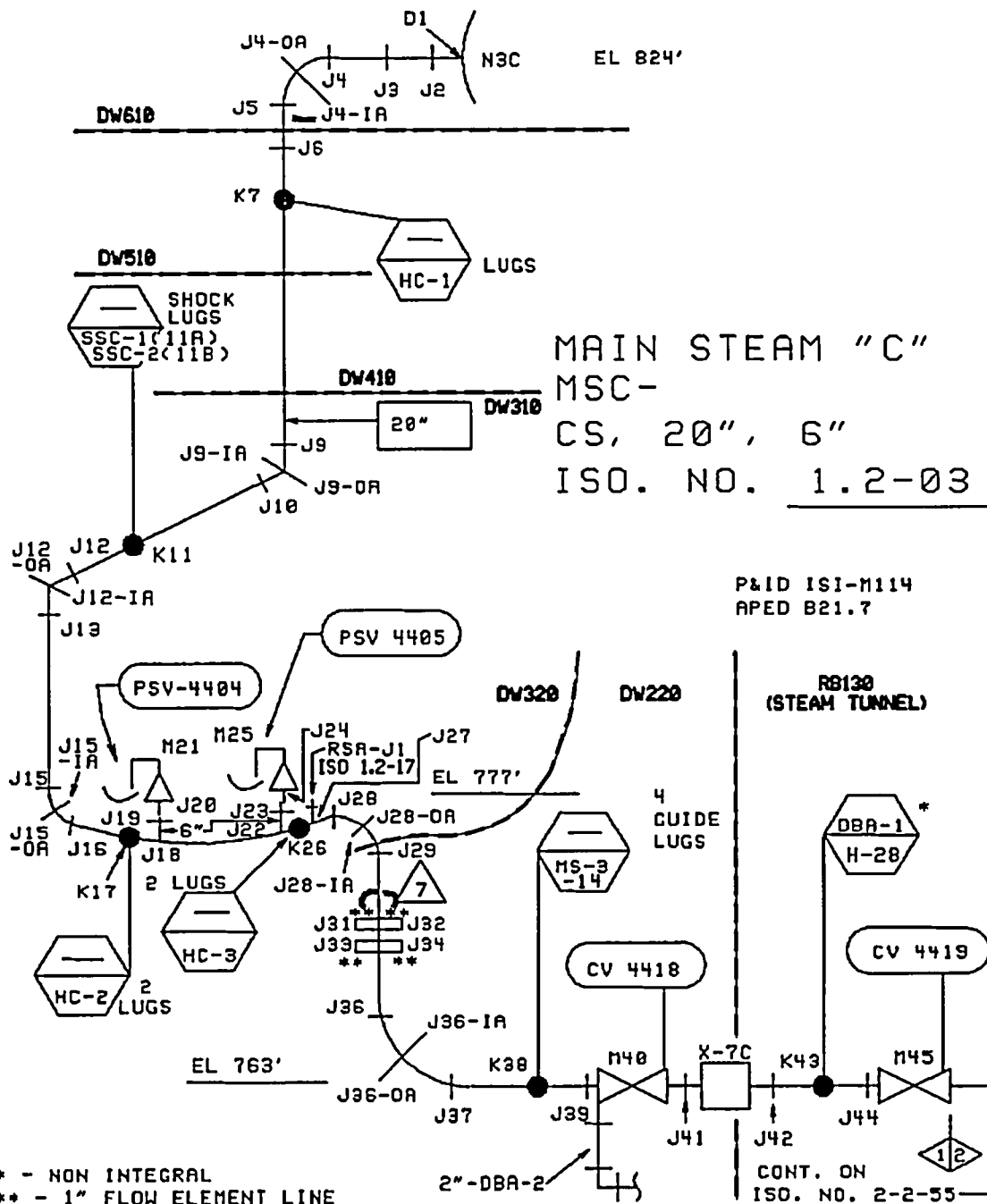


Figure No. 1.1-10



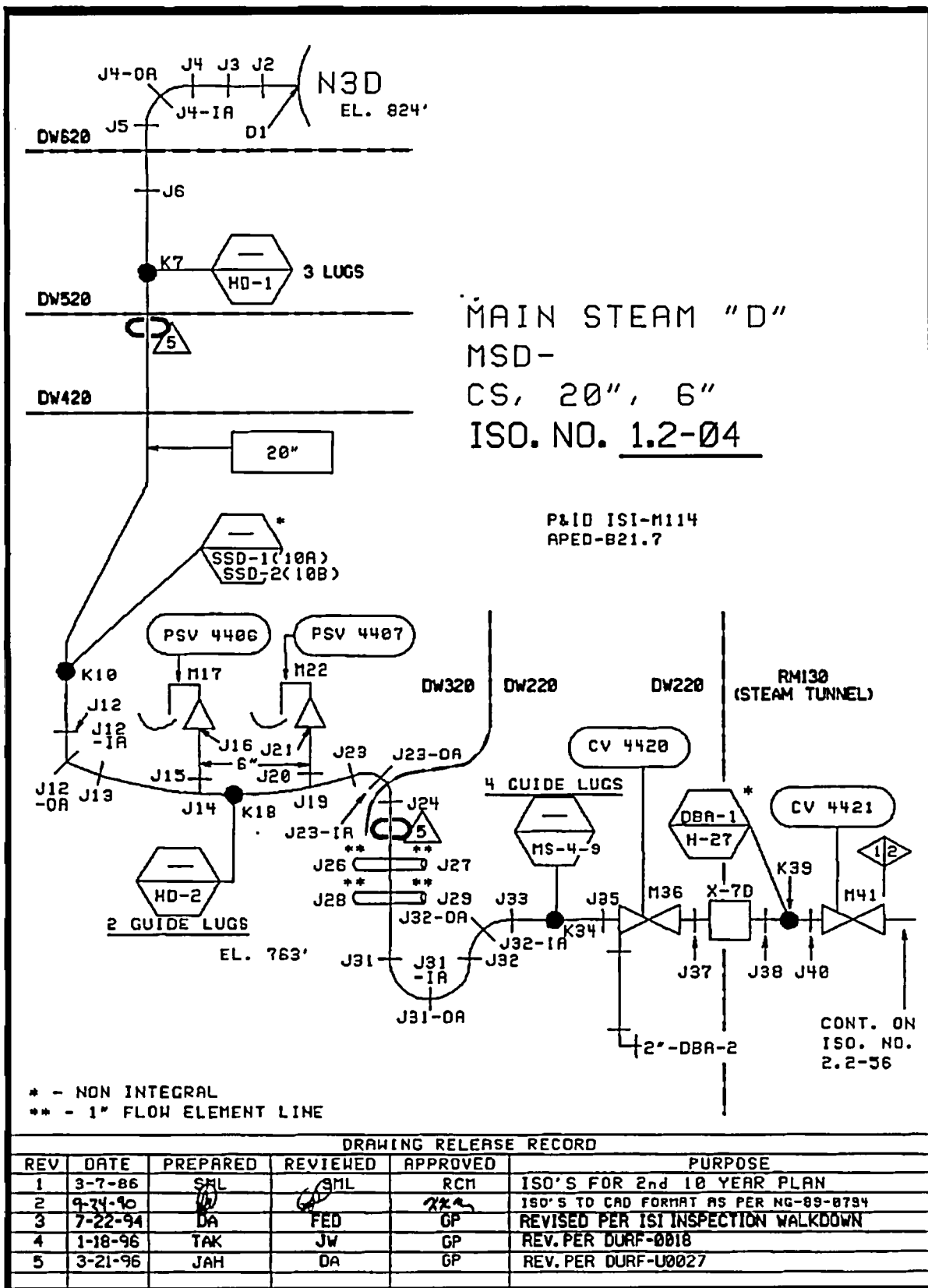
DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
0	5-13-91	DA GR	GR	RLM	PEN "B" NEW DWG IDENTIFYING STABILIZER
1	7-06-95	DA	JP	GR	DELETED DWG PER DURF-0013
2	3/21/96	JAH	DA	GR	RE-ISSUED PER DURF-U0027

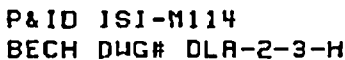


DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	3-21-96	JAH	DA	GP	REV. PER DURE-U0027
2	9-24-98	DA	GP	KKM	ISO'S TO CAD FORMAT AS PER NC-89-8794
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 DURE-0018

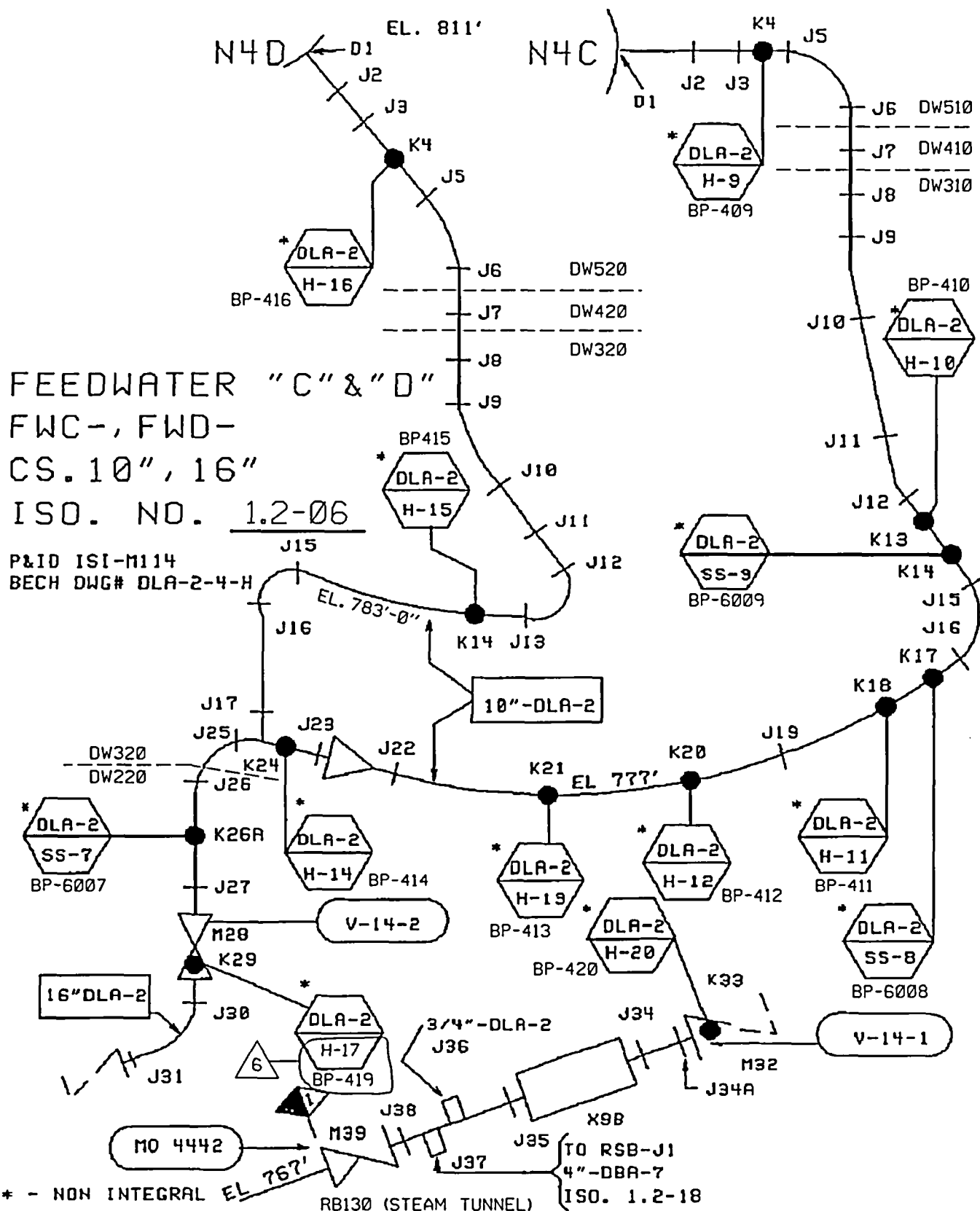


DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC



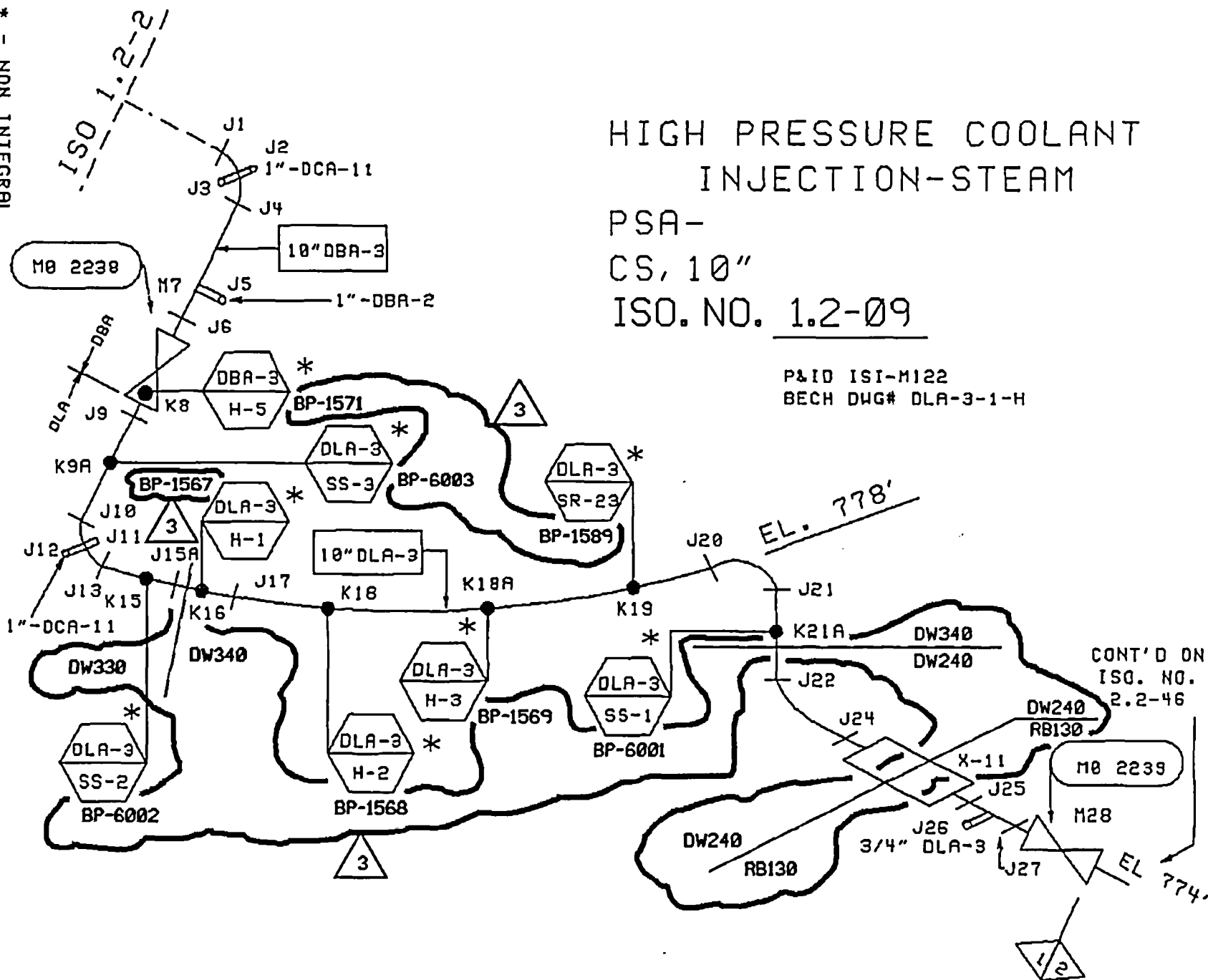
PSB-J1
ISO. 1.2-10
12"-DLA-1 RB130

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
7	6/4/99	DA	GP	FED	REVISED PER DURF-U0111
2	9-24-90	DA	GP	KKM	SO'S TO CAD FORMAT AS PER NC-89-0794
3	11-18-92	DA	GP	GP	REVISED PER DDC-2041
4	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	3-21-96	JAH	DA	GP	REVISED PER DURF-U0027
6	3/26/98	DA	TAK	GP	REVISED PER DURF-U0046



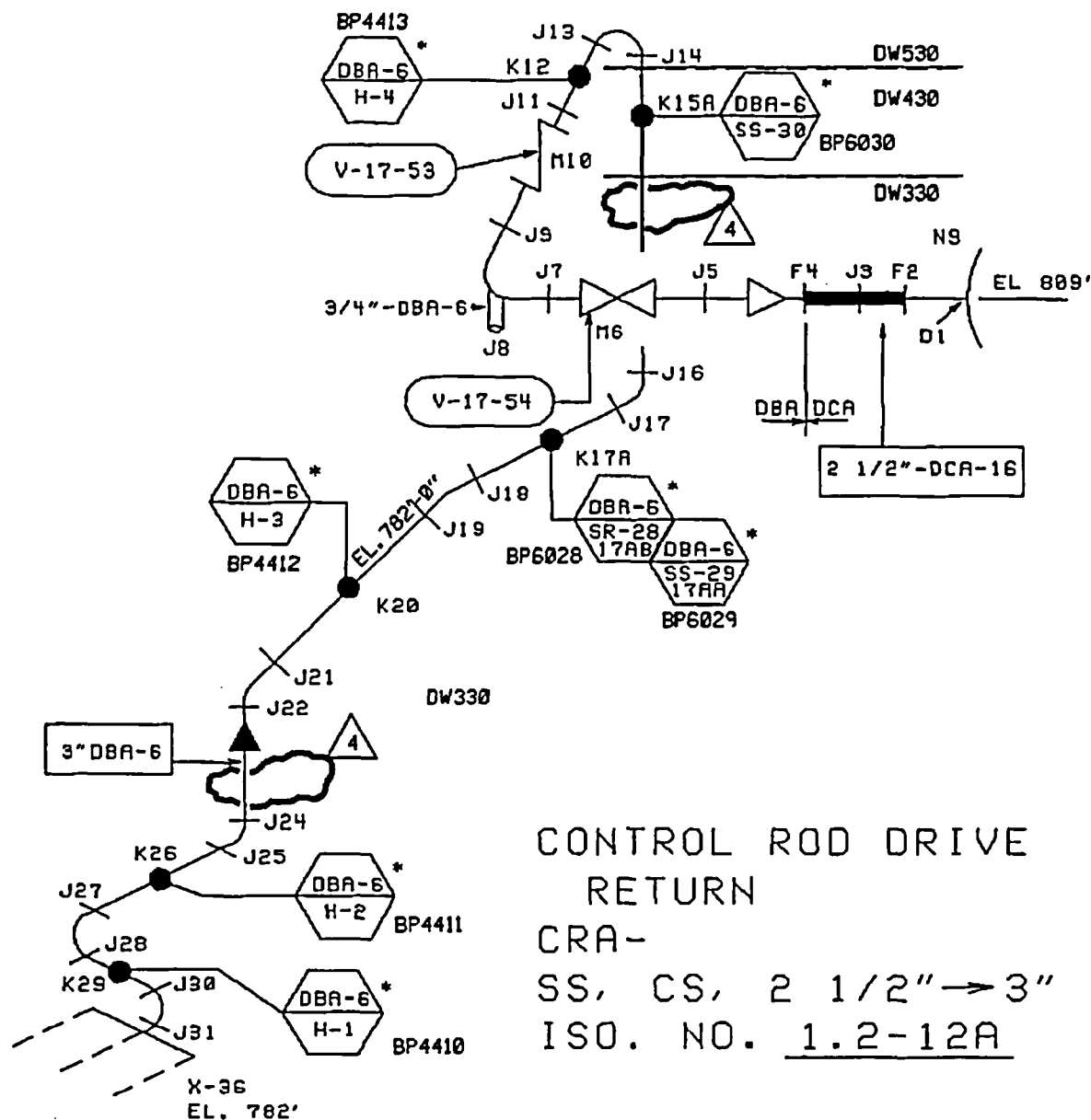
DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-11-86	SHL	SHL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DB	GP	KKM	ISO'S TO CAD FORMAT AS PER NC-89-8794
3	11-10-92	DA	BJB	GP	REVISED PER ODC-2041
4	7-22-94	DA	TAK	GP	REVISED PER ISI INSPECTION WALKDOWN
5	3/26/98	DA	GP	FED	REVISED PER DURF-U0046
6	6/4/99	DA	GP	FED	REVISED PER DURF-U0111

[illegible]

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

CONT'D ON
ISO. NO.
2.2-46



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-I-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	7-24-90	DA	DA	KX	ISO'S TO CAD FORMAT AS PER HG-89-0704
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN
4	7-6-95	DA	JDF	GP	REVISED PER DUF-0013

DAEC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC

DRAWING RELEASE RECORD

PURPOSE

APPROVED

REVIEWED

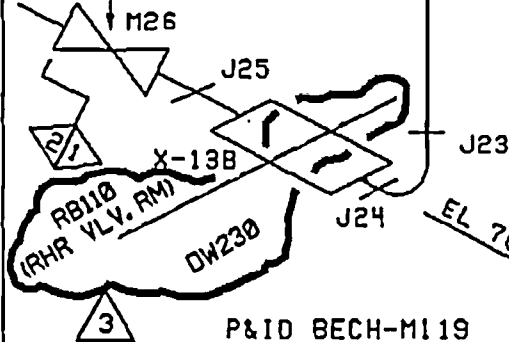
PREPARED

DATE

REV

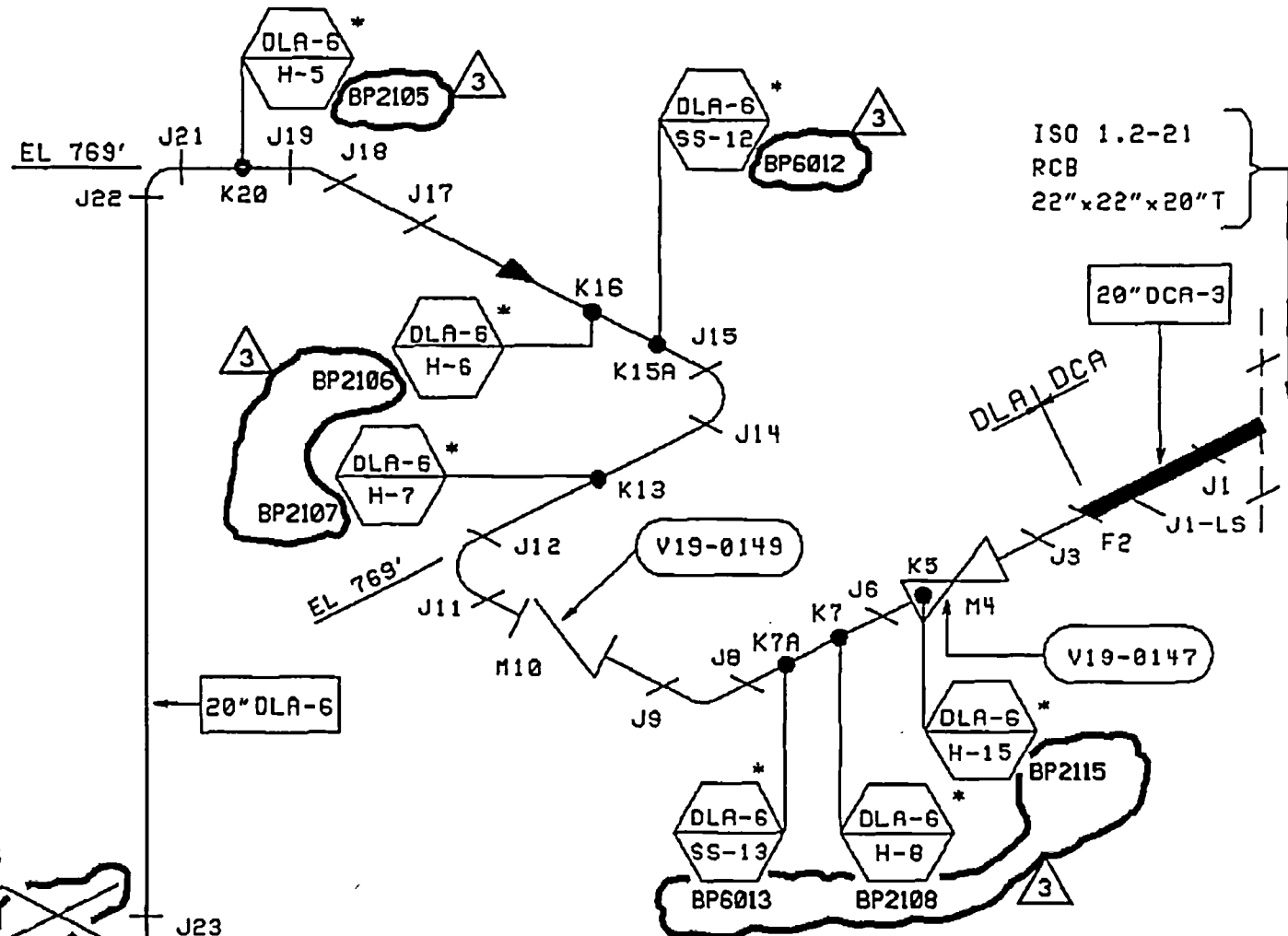
CONT'D ON
ISO. NO.
2.2-40

MO 1905



P&ID BECH-M119
BECH DWG# DLA-6-1-H

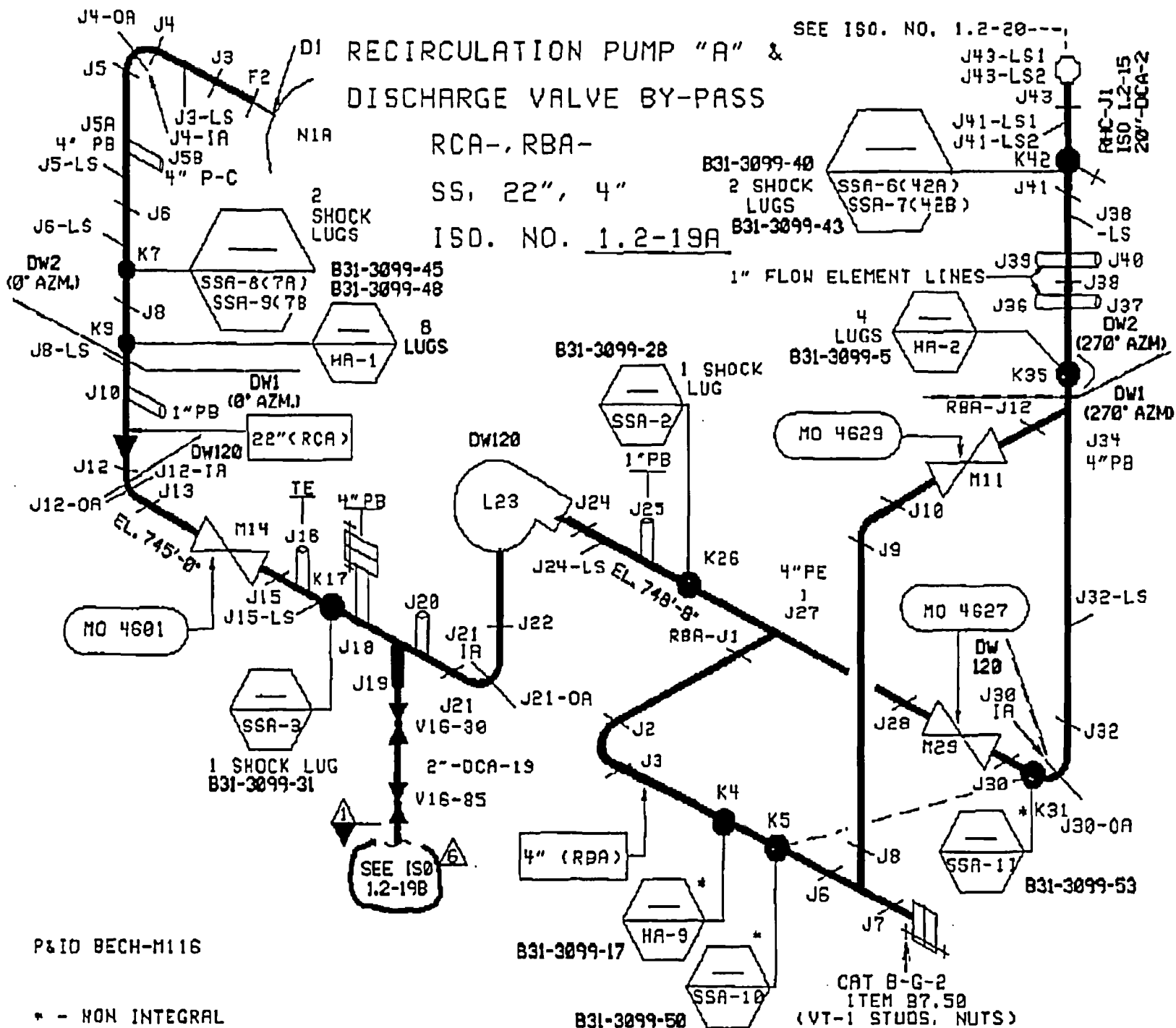
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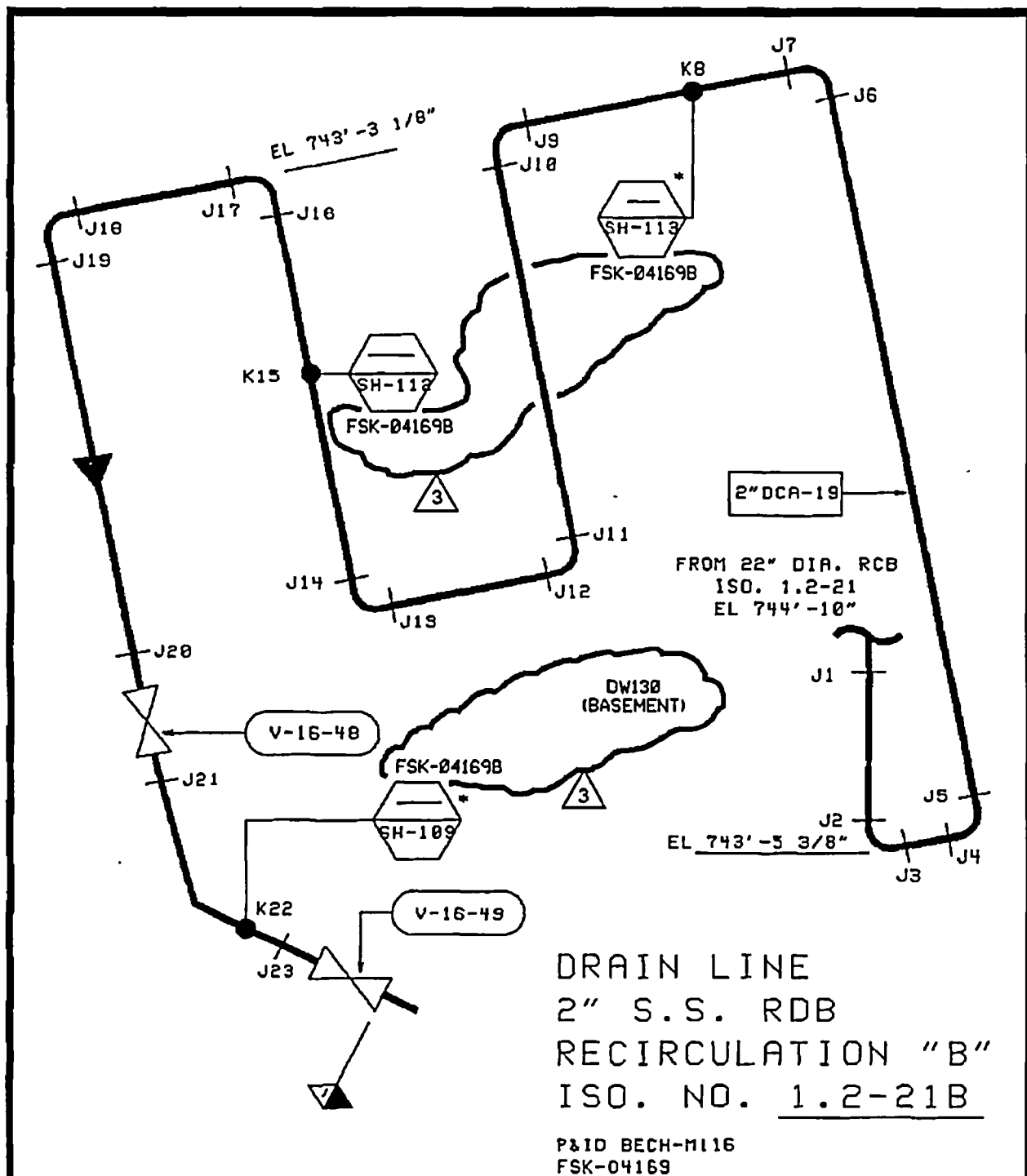


RESIDUAL HEAT REMOVAL-20B
RHD-
SS, CS, 20"
ISO. NO. 1.2-16

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-19-86	SM	SM	SM	ISO'S FOR END 10 YEAR PLAN
2	9-24-90	DR	GP	KKM	ISO'S TO CND FORMAT AS PER NC-89-0794
3	4-2-93	DR	GP		ADDED FLANGE
4	7-22-94	DA	FED	GP	REVISED PER ISI INSPECTION WALKDOWN
5	7-6-95	DA	JDF	GP	REVISED PER DURE-0013
6	1-18-96	TAK	JW	GP	REV. PER DURE-0010

DRAWING RELEASE RECORD





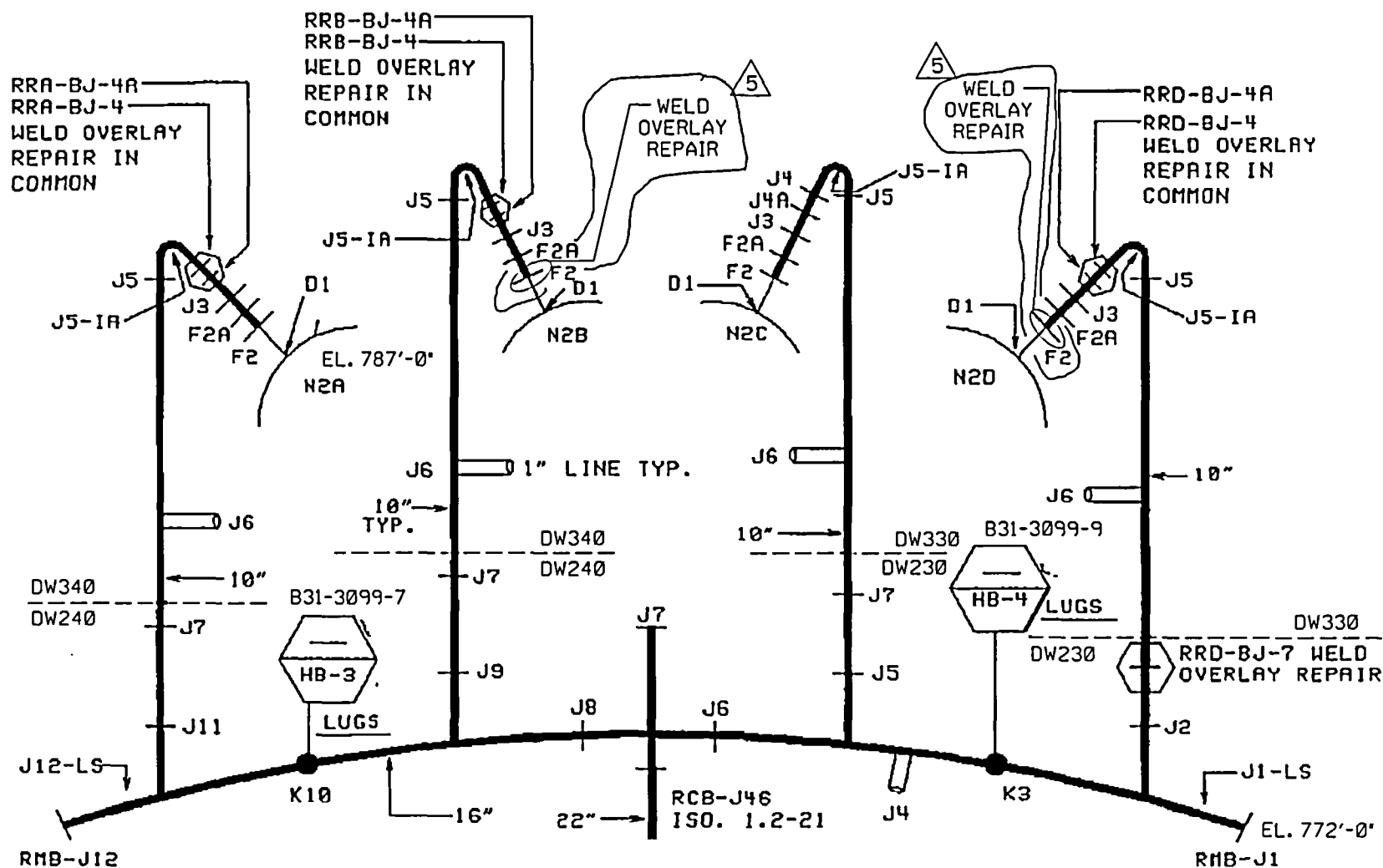
* - NON INTEGRAL

DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-21-86	SHL	SHL	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	DA	DA	RCM	ISO'S TO CAD FORMAT AS PER HG-89-0794
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN

DAEC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC

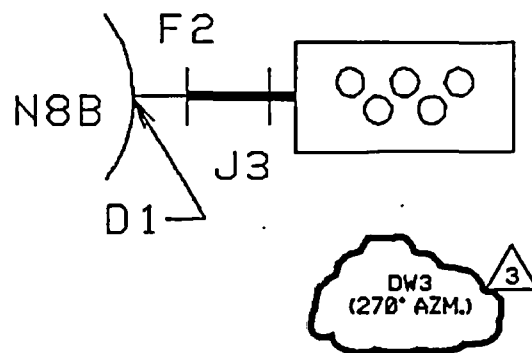
DRAWING RELEASE RECORD				PURPOSE
REV	DATE	PREPARED	REVIEWED	APPROVED
1	3-20-86	SHL	SHL	ISO'S FOR 2nd 10 YEAR PLAN
2	9-21-90	DA	GP	ISO'S TO CND FORMAT AS PER NC-89-0794
3	7-22-94	DA	JAH / BJB	REVISED PER ISI INSPECTION WALKDOWN
4	1/18/96	TAK	JW	REV. PER DURF-0018
5	1/13/00	JW	TAK	REV. PER DURF-0136



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

P&ID BECH-M1
APED B31-9

P&ID BECH-M116
APED B31-9



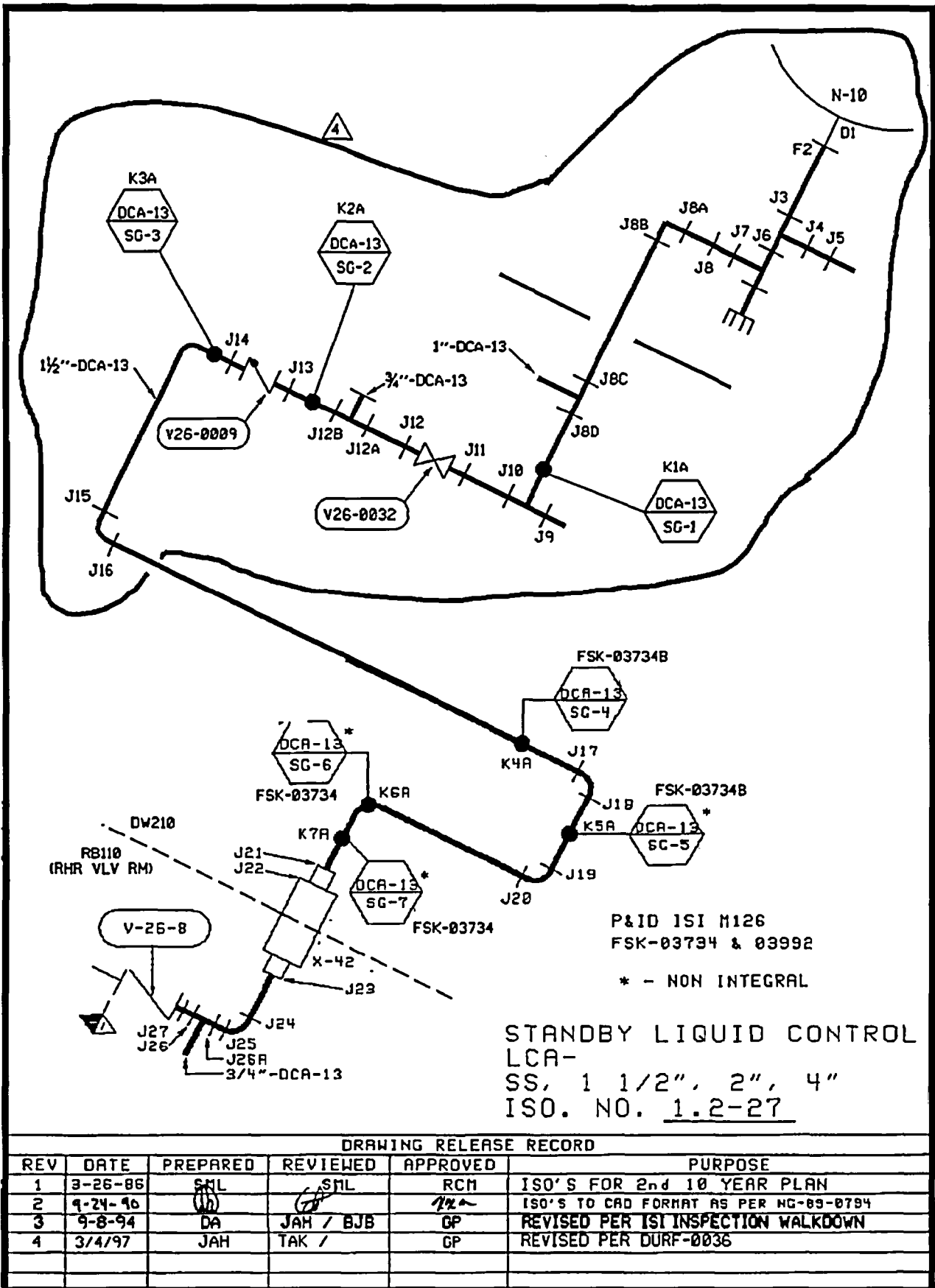
JET PUMP INSTRUMENTATION "B"
 JPB-
 SS, 4"
 ISO. NO. 1.2-26

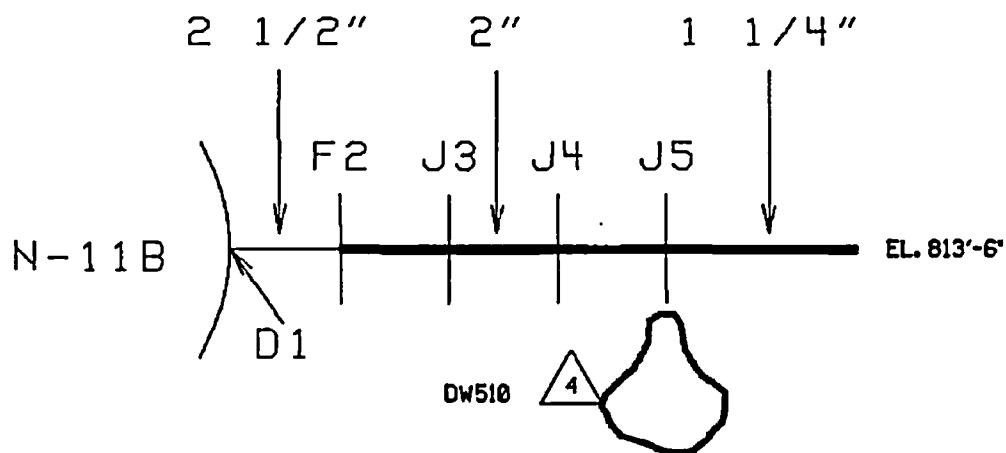
P&ID BECH-M115
 RPED-B11-2655-105-4

DRAWING RELEASE RECORD

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

DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC





VESSEL INSTRUMENTATION N-11B
 VIB-
 SS, 1 1/4", 2", 2 1/2"
 ISO. NO. 1.2-29

P&ID BECH-M115
 FSK-5564

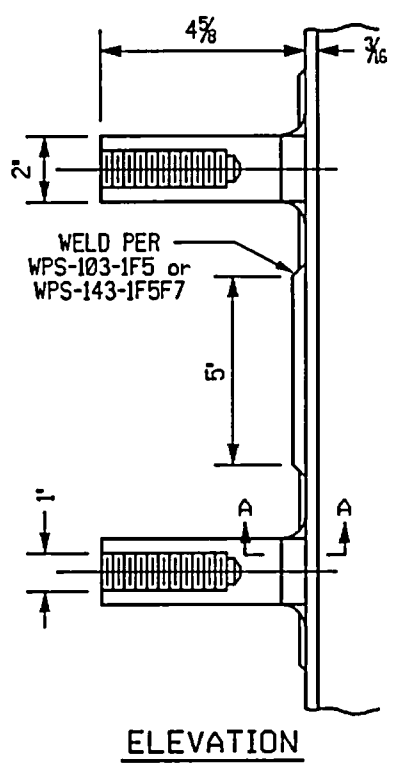
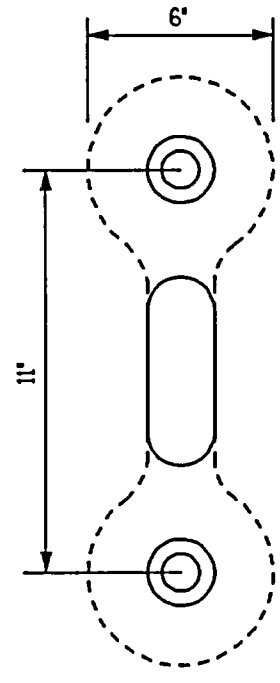
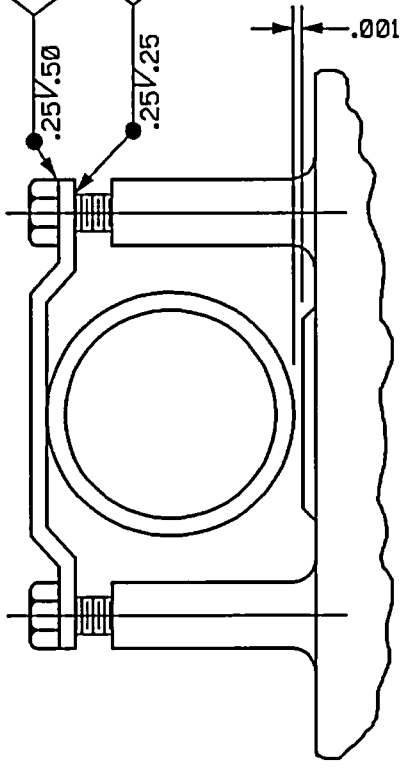
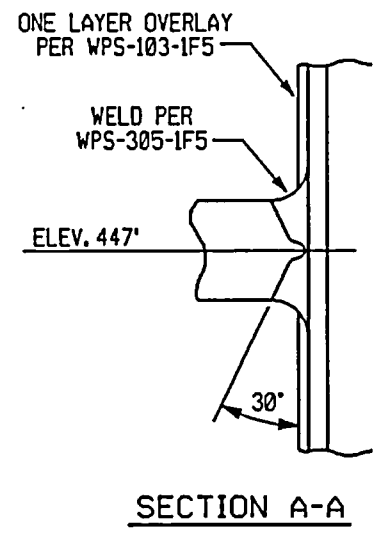
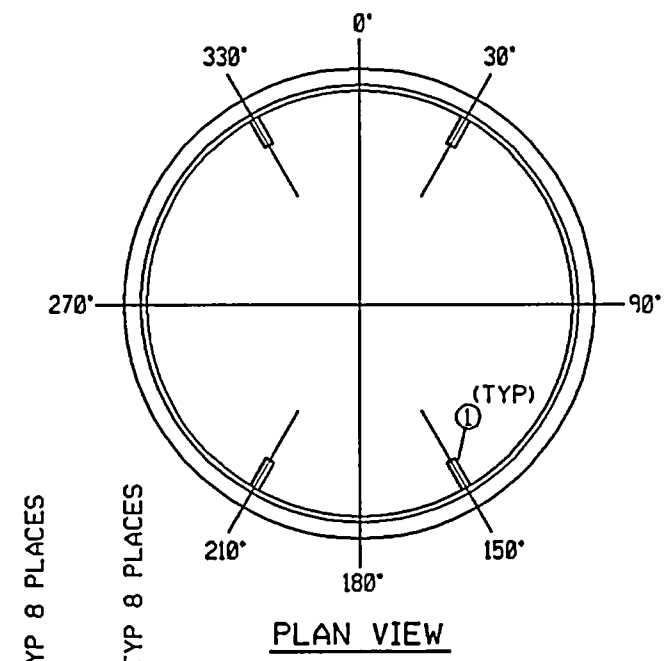
DRAWING RELEASE RECORD

REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-27-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	4-24-90	(SML)	(SML)	KRM	ISO'S TO CAD FORMAT AS PER NG-89-0794
3	7-22-94	DA	JAH / FED	GP	REVISED PER ISI INSPECTION WALKDOWN
4	1/18/96	TAK	JW	GP	REV. PER DURE-0018

DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC

NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	CORE SPRAY BRKT.	304L SA240	

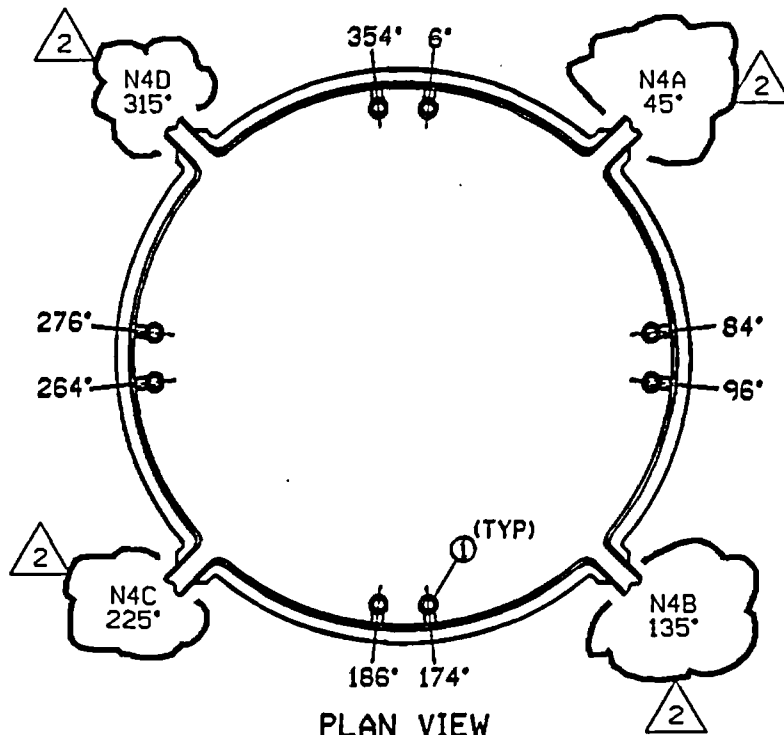
NO.	DATE	REV.	DESCRIPTION	MS	DF	GP	SS
1	12-08-94		DRAFTED FOR VESSEL INSPECTION PROGRAM				
			REVISION				
			DR. TR. CHK'D. ENGR. VER.				



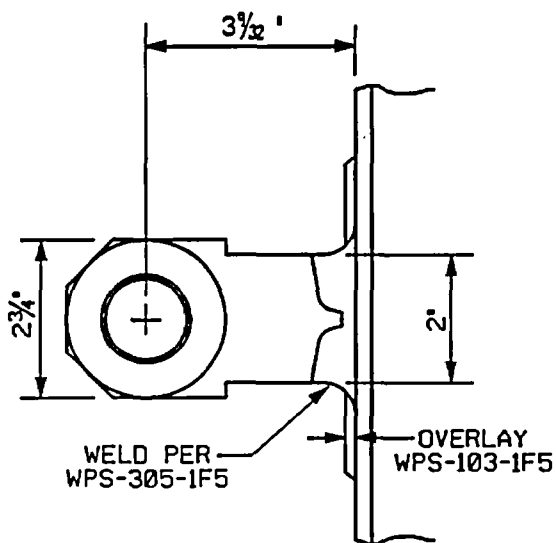
REFERENCE DRAWINGS:
APED-B11-001<4>, APED-B11-2655-168

IES: Inservice Inspection Program Reactor Pressure Vessel Sketch				CORE SPRAY BRACKET			
DWG. NO. VS-01-26				REV. 1			

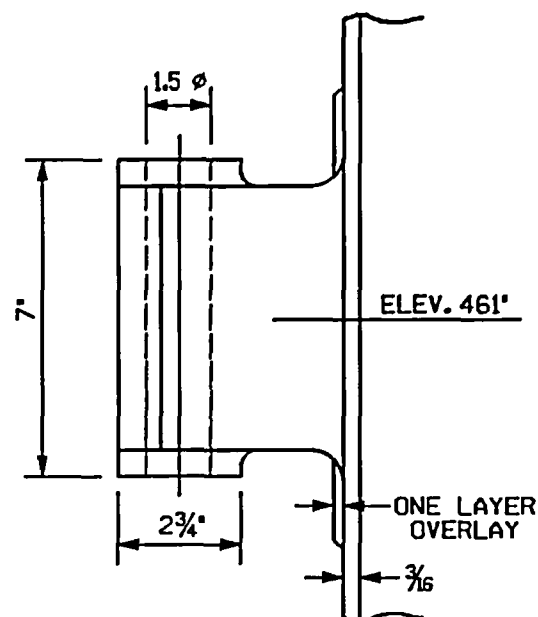
NO.	DESCRIPTION	BILL OF MATL.	PROCD.
1	FW SPARGER BRACKET	384L SA248	



PLAN VIEW



PLAN



ELEVATION

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

IES:
Inservice Inspection Program
Reactor Pressure Vessel Sketch

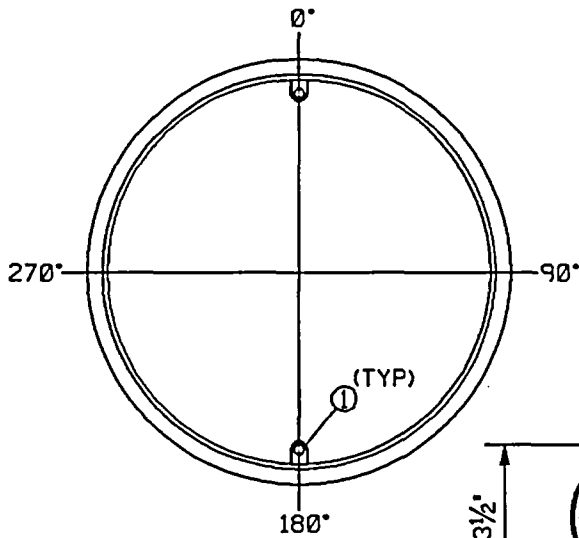
FEEDWATER SPARGER
BRACKET

DWG. NO. VS-01-27

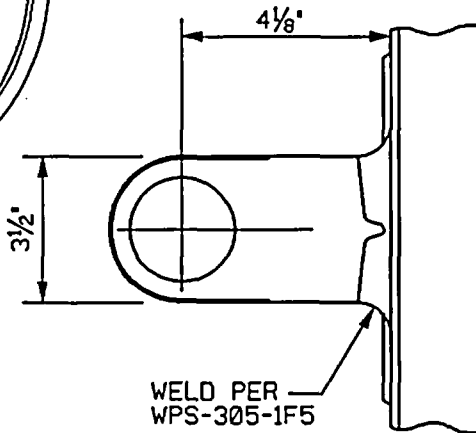
REV.
2

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

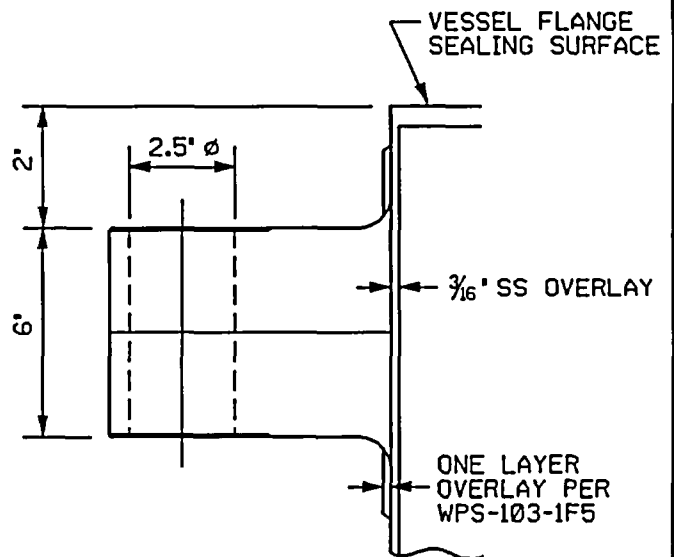
NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	GUIDE ROD BRACKET	304L SA240	



PLAN VIEW



PLAN VIEW



ELEVATION

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

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[illegible]

PLAN VIEW

SECTION A-A

ELEVATION

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

IES:

Inservice Inspection Program Reactor Pressure Vessel Sketch

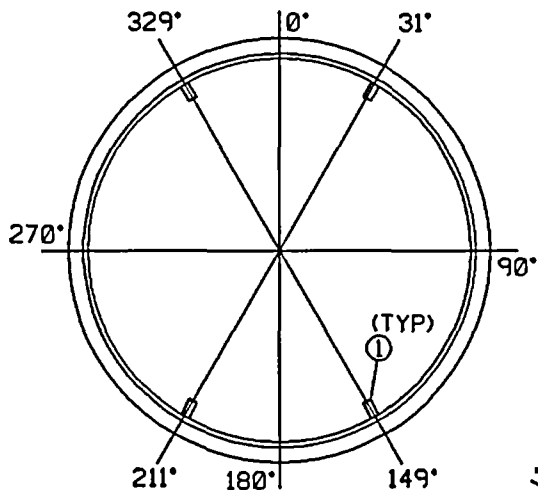
STEAM DRYER
SUPPORT BRACKET

DWG. NO.

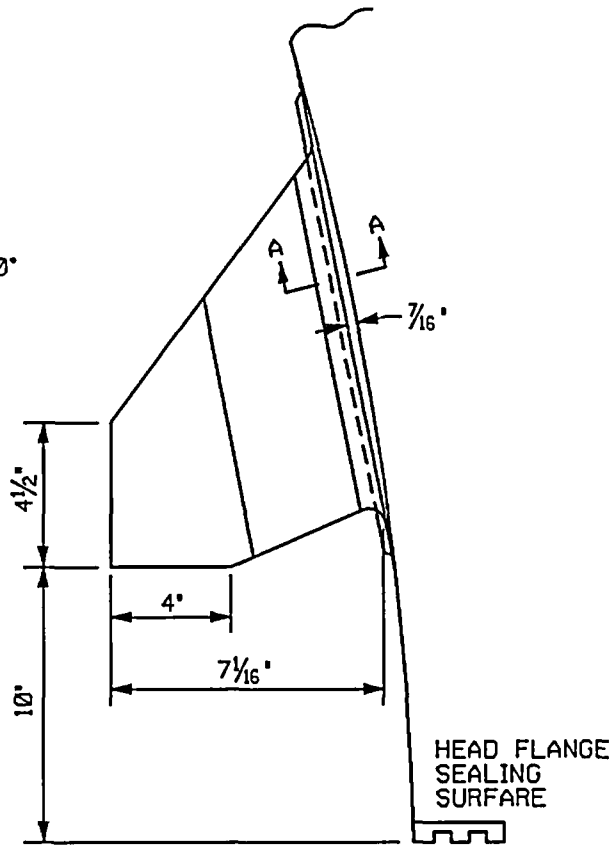
VS-01-29

REV.
1

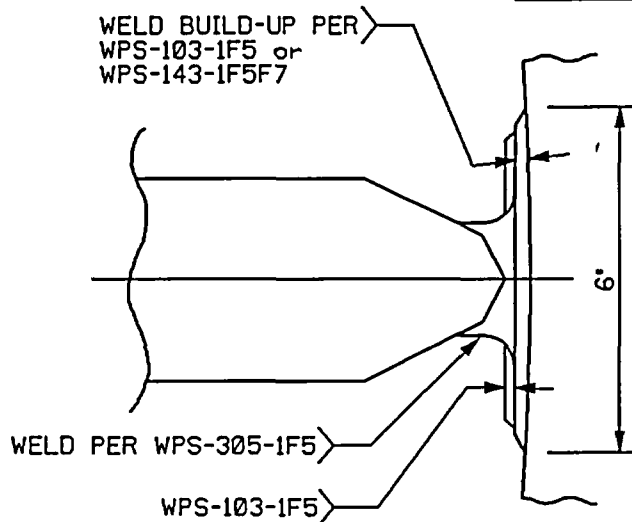
NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	DRYER HOLD DOWN BRACKET	304L SA240	



PLAN VIEW-TOP HEAD



ELEVATION VIEW



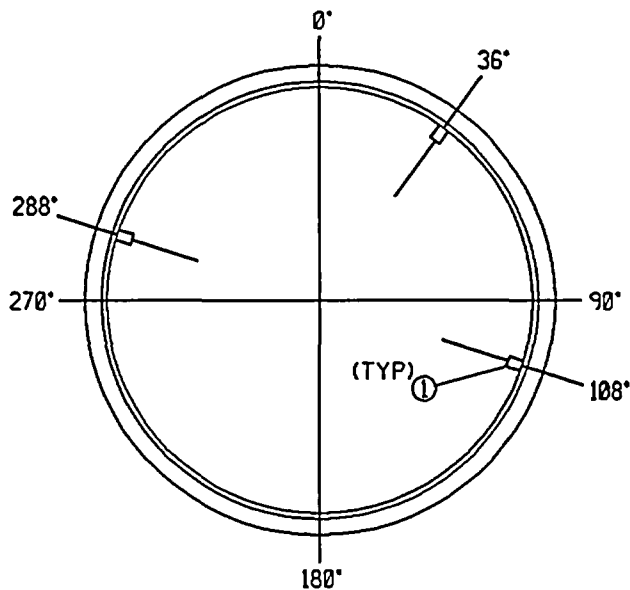
SECTION A-A

REFERENCE DRAWINGS:
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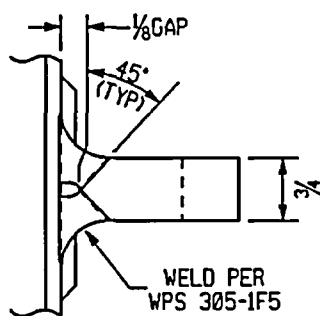
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STEAM DRYER
HOLD-DOWN BRACKETS

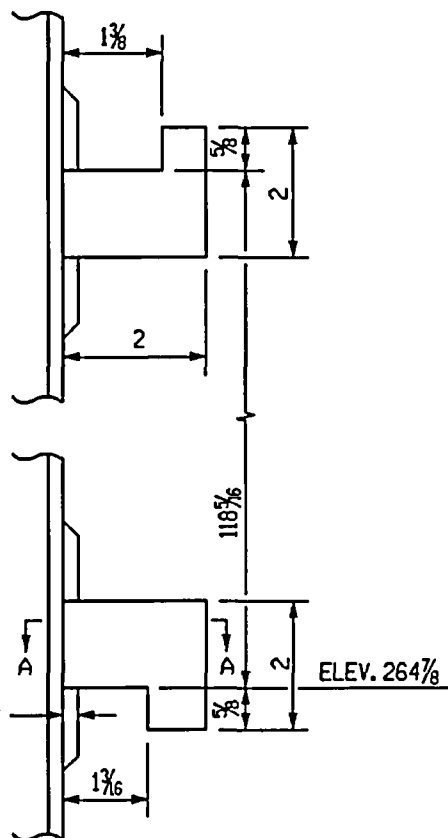
NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	SURV. SPECIMEN BRKT.	304L SA240	



PLAN VIEW



SECTION A-A



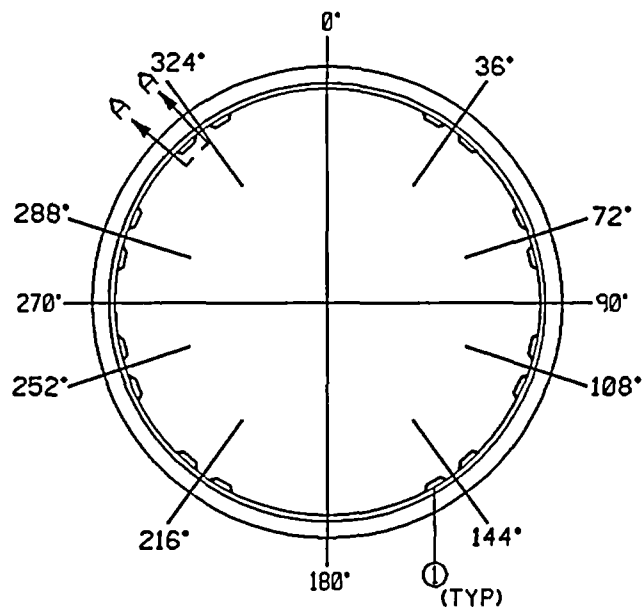
ELEVATION

ONE LAYER OVERLAY
PER WPS-103-1F5

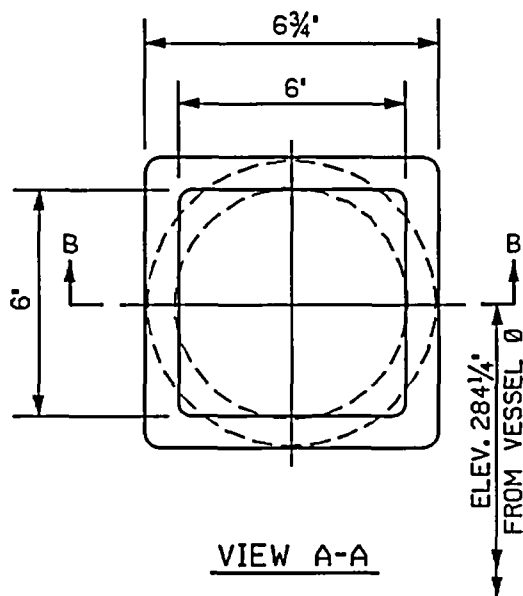
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APED-B11-001<4>, APED-B11-059,
APED-B11-067, APED-B11-2655-198

12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP	SS
NO.	DATE	REV.	CHK'D	ENCR.	VER.
1	12-09-94	1			
<p>IES: Inservice Inspection Program Reactor Pressure Vessel Sketch</p>					
<p>SURVEILLANCE SPECIMEN BRACKET</p>					
DWG. NO.				VS-01-31	
				REV. 1	

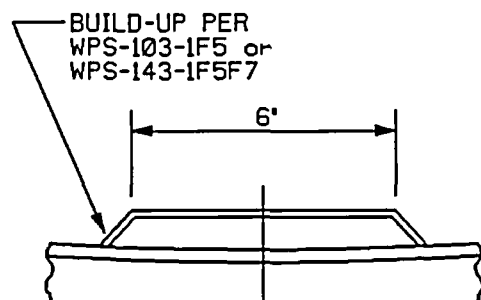
NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	SUPPORT PAD	309 or 308L	



PLAN VIEW



VIEW A-A



SECTION B-B

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

IES:
Inservice Inspection Program
Reactor Pressure Vessel Sketch

JET PUMP RISER
SUPPORT PAD

DWG. NO.

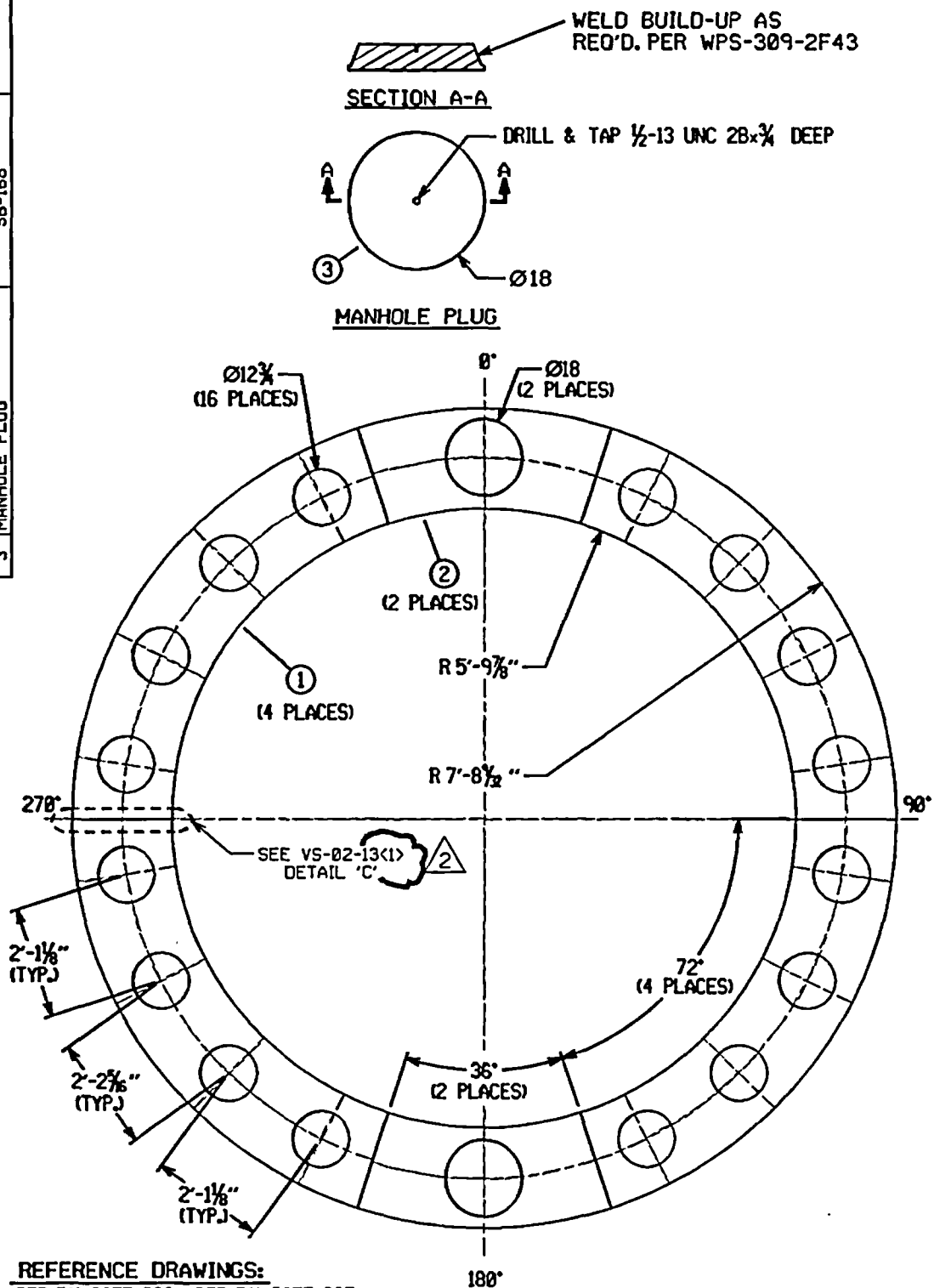
VS-01-34

REV.
1

NO.	DATE	REVISION	MS	DF	GP	SS
1	12-08-94	DRAFTED FOR VESSEL INSPECTION PROGRAM				
			DFT	TR	CHK'D	ENCR.
						VER.

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	DA	GD	SS	SS	GP	SS	VER.
2	8/8/95	REVISED PER DURF-0011							
1	11-23-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP	SS			
			DR	TR	CHKD	ENGR			



REFERENCE DRAWINGS:
 APED-B11-2655-203, APED-B11-2655-205,
 APED-B11-2655-265

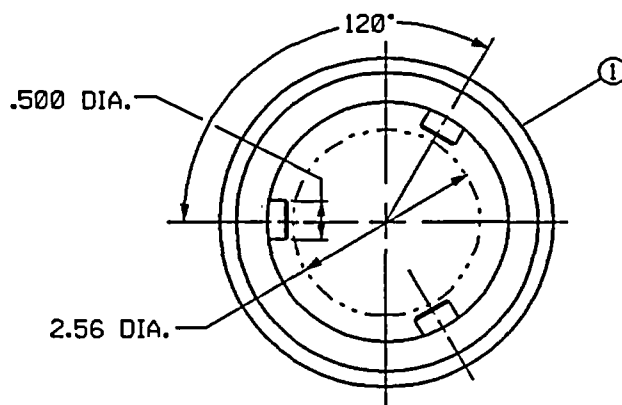
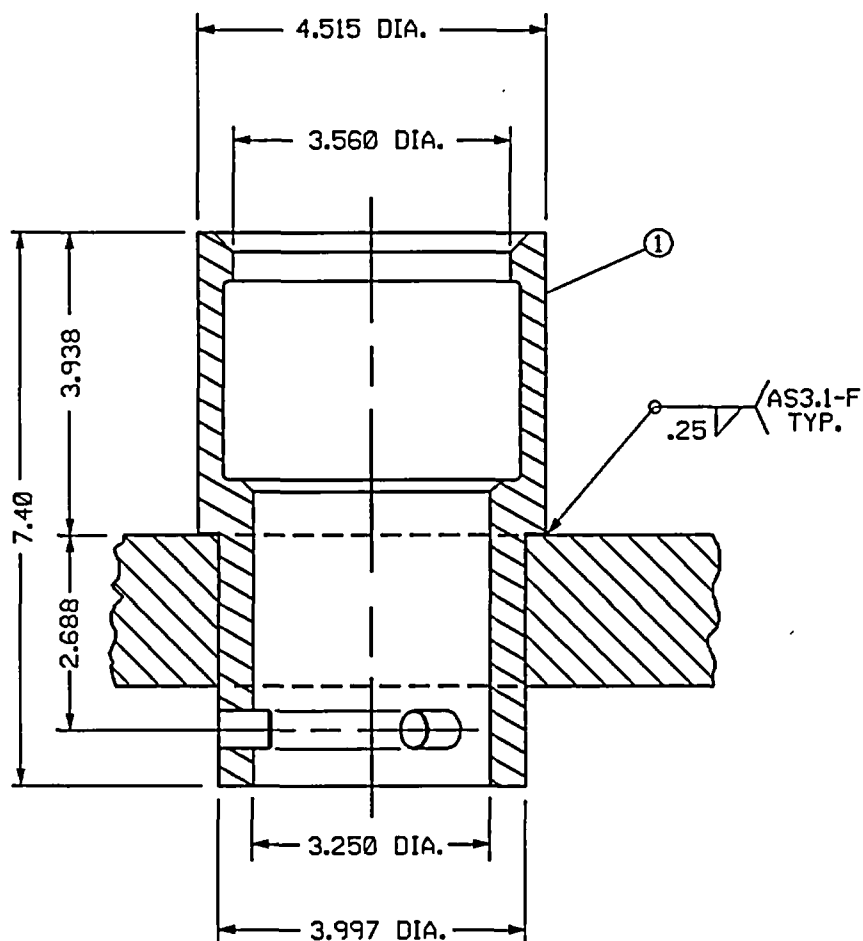
IES:
 Inservice Inspection Program
 Reactor Pressure Vessel Sketch

LEDGE SEGMENT
 PLATES

DWG. NO.

VS-02-11

REV.
 2

[illegible]

REFERENCE DRAWINGS:
APED-B11-3084-008,
APED-B11-011

IES:
Inservice Inspection Program
Reactor Pressure Vessel Sketch

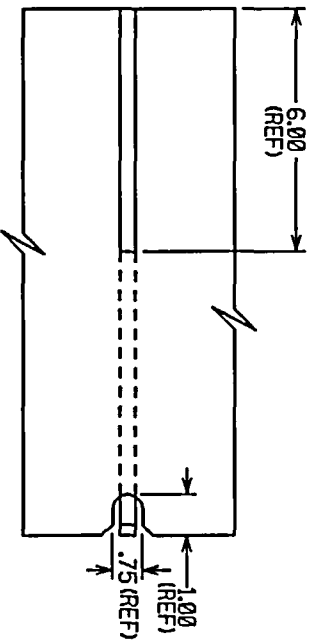
PERIPHERAL FUEL SUPPORT

DWG. NO. VS-03-09

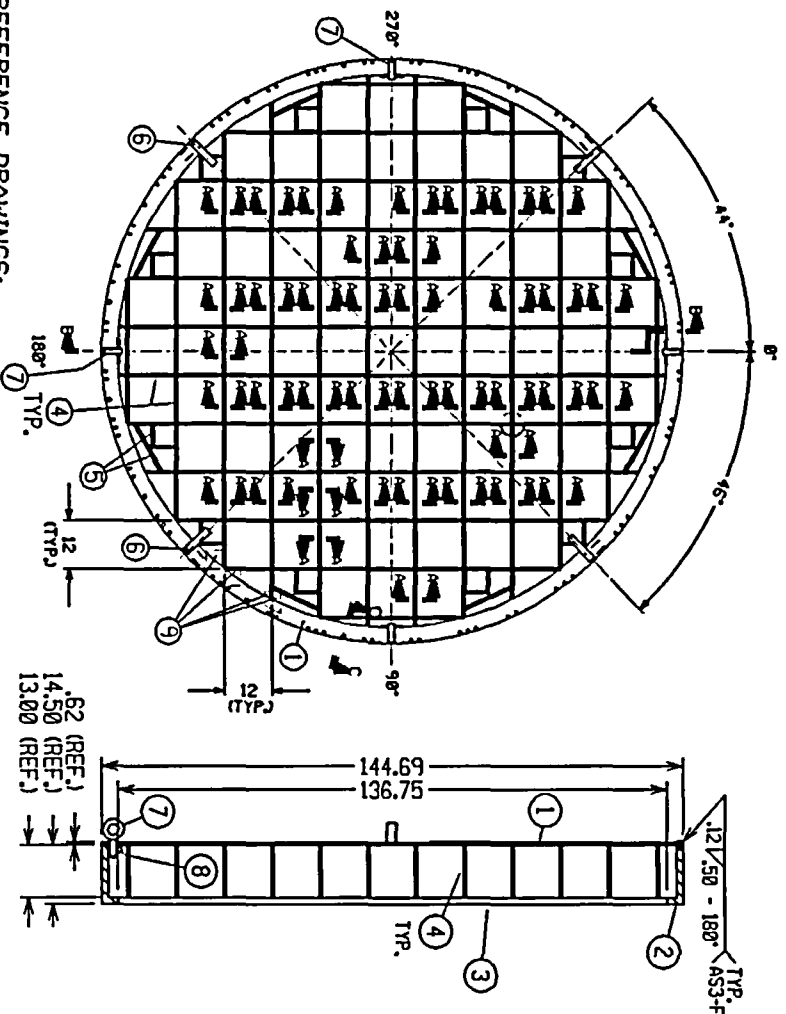
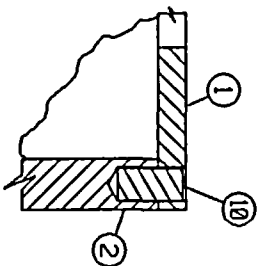
REV.
1

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 (0.875" DIA.)	304 A276	

SECTION A-A



SECTION C-C



SECTION B-B

REFERENCE DRAWINGS:
APED-B11-3084-001,
APED-B11-3084-108

IES:

Inservice Inspection Program
Reactor Pressure Vessel Sketch

TOP
GUIDE

DWG. NO.

VS-04-01

REV.
1

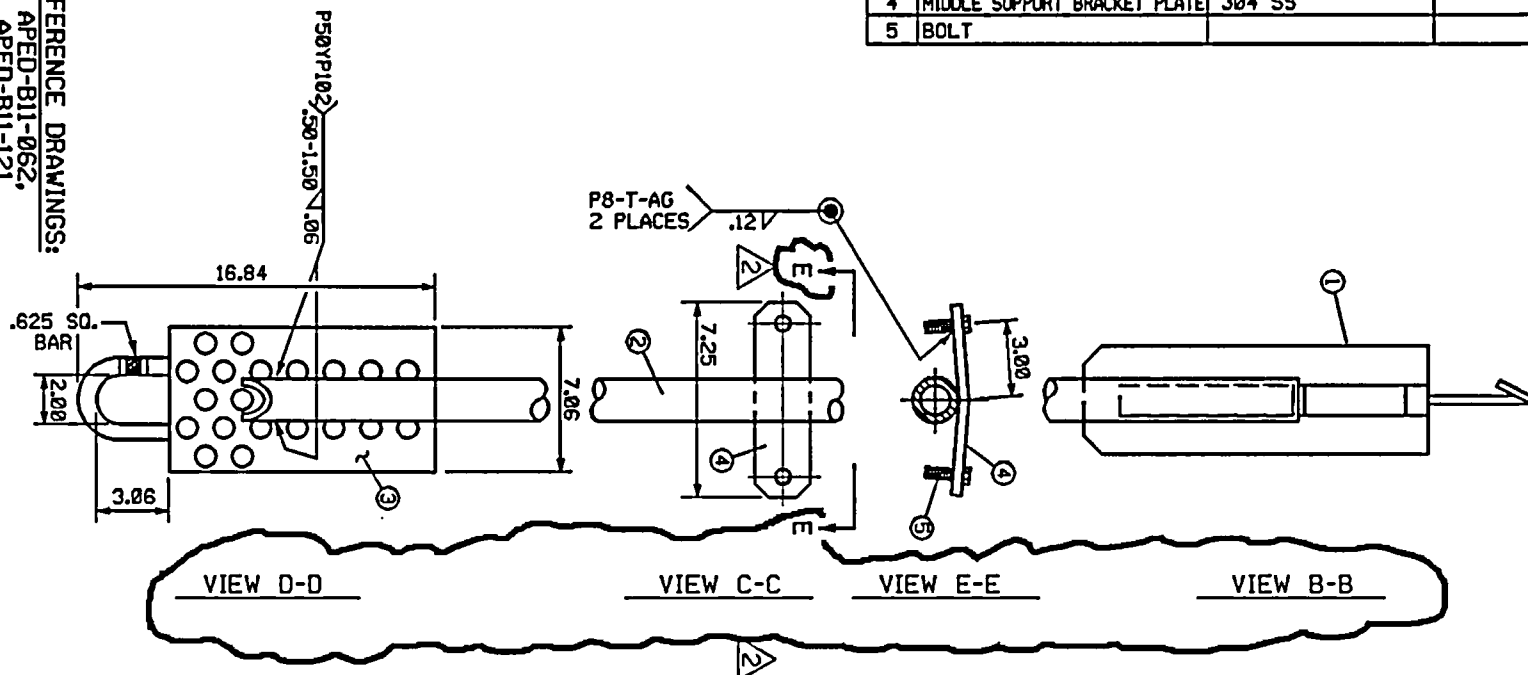
NO.	DATE	REVISION	DRAWN	CHECKED	ENGINEER	VER.
1	12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP	SS

2	8/8/95	REVISED PER DURF-0011	DA	GD	SS	SS
1	12-09-94	DRAFTED FOR VESSEL INSPECTION PROGRAM	MS	DF	GP	SS
NO.	DATE	REVISION	DRFTR	CHK'D	ENGR.	VER.

NO.	DESCRIPTION	BILL OF MATL.	PROCED.
1	HANDLE		
2	PIPE		
3	CAPSULE BASKET		
4	MIDDLE SUPPORT BRACKET PLATE	304 SS	
5	BOLT		

REFERENCE DRAWINGS:
APED-B11-062,
APED-B11-121

IES:
Inservice Inspection Program
Reactor Pressure Vessel Sketch



SAMPLE HOLDER

DWG. NO.

VS-10-02

REV.
2

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part J, page 1 of 5

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

STATUS OF WORK FOR THIRD TEN YEAR INTERVAL

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

CLASS 1

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
B1.11	4	0%	0%	0%	See Note 12
B1.12	8	0%	0%	75%	See Note 13
B1.21	2	25%	50%	100%	
B1.22	15	0%	0%	100%	
B1.30	1	50%	50%	100%	See Note 7
B1.40	1	33%	67%	100%	See Note 14
B3.90	33	48%	73%	100%	See Note 1,8
B3.100	33	48%	73%	100%	See Note 1,8
B4.11	2	0%	0%	100%	See Note 2
B4.12	89	0%	0%	100%	See Note 2
B4.13	30	0%	0%	100%	See Note 2
B5.10	14	50%	71%	71%	See Note 8 and 11
B5.20	8	38%	63%	63%	See Note 11
B5.130	8	38%	63%	63%	See Note 11
B5.140	2	0%	50%	50%	See Note 11
B6.10	60	33%	67%	100%	
B6.20	56	29%	64%	100%	
B6.30	4	100%	100%	100%	
B6.40	60	33%	67%	100%	
B6.50	60	33%	67%	100%	
B6.180	2	0%	0%	0%	See Note 3
B6.190	2	0%	0%	0%	See Note 3
B6.200	2	0%	0%	0%	See Note 3
B7.10	3	33%	67%	100%	
B7.50	5	20%	20%	20%	See Note 3
B7.60	2	0%	0%	0%	See Note 3
B7.70	47	4%	6%	9%	See Note 3
B7.80	89	15%	15%	34%	See Note 3
B9.11	94	22%	33%	33%	See Note 11
B9.12	0	0%	0%	0%	See Note 6 and 11
B9.21	9	22%	22%	22%	See Note 11
B9.31	6	17%	33%	33%	See Note 11
B9.32	1	0%	0%	0%	See Note 11
B9.40	23	22%	40%	40%	See Note 11
B10.10	5	0%	0%	100%	See Note 4
B10.20	3	33%	67%	100%	See Note 4

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part J, page 2 of 5

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

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%	100%	See Note 4
B12.20	2	0%	0%	0%	
B12.50	45	6%	9%	11%	See Note 3
B13.10	35	37%	63%	100%	See Note 15
B13.20	11	36%	36%	100%	
B13.30	27	4%	9%	100%	See Note 16
B13.40	5	20%	20%	100%	
B14.10	3	0%	0%	100%	
B15.10	1	N/A	N/A	N/A	Once per refueling outage
B15.11	1	N/A	N/A	N/A	Once per interval

CLASS 1 AND CLASS 2 Risk Informed

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
R-I	70	0%	33%	61%	See Note 11

CLASS 2

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

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part J, page 3 of 5

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

**STATUS OF WORK FOR THIRD TEN YEAR INTERVAL
CLASS 1 AND 2 SUPPORTS**

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

STATUS OF WORK FOR (IWE) FIRST TEN YEAR INTERVAL

CLASS MC

<u>ITEM NO.</u>	<u>TOTAL #</u>	<u>PERIOD 1</u>	<u>PERIOD 2</u>	<u>PERIOD 3</u>	<u>REMARKS</u>
E1.11	3	33%	67%	100%	
E1.12	31	19%	67%	87%	
E1.20	8	38%	75%	100%	
E4.11	2	0%	40%	100%	See Note 9
E5.30	4	25%	75%	100%	
E8.10	14	29%	71%	78%	
E9.20	*	N/A	N/A	N/A	See Note 10

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part J, page 4 of 5

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

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-P010)
- 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-I004)
- NOTE 5 - Item Number F1.10, F1.20, F1.40**
These item numbers are from Code Case N491-1 (TAP-I005)
- 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-R009)
- 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-R024 allows alternative percentages (ref. Code Case N-598). 2 of the Nozzle-to-safe-end welds (RRB-F002 and RRD-F002) have been repaired by applying a weld overlay. These two welds are now covered by the requirements of BWRVIP-75.
- NOTE 9 - Item Number E4.11**
The DAEC has evaluated the need for augmented examination per this item number and has determined that the Torus should be examined twice per interval. Details are specified in Technical Approach and Position TAP-E002.
- NOTE 10 - Item Number E9.20**
There are no components identified under this item number because the DAEC has been approved to use Option B of Appendix J. The "Performance Based Containment Testing Program" contains the requirements.
- NOTE 11 - Item Numbers B5.XX, B9.XX, C5.XX, and R-I**
Risk-Informed methods are utilized as described in EPRI TR-112657B-A to determine scope of inspections for examination categories B-F, B-J, and C-F-2. The Risk-Informed scope has been combined into a new item number R-I for implementation in the second and third periods of the third interval.

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part J, page 5 of 5

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

NOTE 12 – Item Number B1.11

There are no welds counted for this item number because of the use of Relief Request NDE-R33

NOTE 13 – Item Number B1.12

Relief Request submitted July 14, 2005 requested deferral of examination of two welds.

NOTE 14 – Item Number B1.40

This weld was examined in “thirds”. To obtain increased coverage, the “third” that was examined in period 1 was re-examined in period 3.

NOTE 15 – Item Number B13.10

Areas to be examined shall include the spaces above and below the reactor ore that are made accessible for examination by removal of components during normal refueling outages.

NOTE 16 – Item Number B13.30

The RFO 17 Summary Report included Shroud Ledge/Vessel Weld (Summary No. 175000) as a B-N-1, B13.10 examination, however it did not report the B-N-2, B13.30 VT-3 performed (Summary No. 174700).

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part K, page 1 of 2

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

RELIEF REQUESTS / CODE CASES

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

<u>RELIEF REQUESTS</u>	<u>DESCRIPTION</u>
NDE-R001	Reactor Vessel weld limitations
NDE-R008	Use of existing calibration blocks
NDE-R011	Exemption from Appendix III calibration block notch dimensions
NDE-R012	Use of the 1992 Addenda of ASME Section XI to govern repairs/replacements
NDE-R013	Examination of reactor vessel closure head nuts
NDE-R018	Limited examinations of Nozzle to Vessel welds
NDE-R025	Alternative requirements to Appendix VIII Supplement 4, length sizing acceptance criteria
NDE-R026	Alternative Requirements to VII-4240 "Annual Training"
NDE-R027	Use of the 1992 Edition of ASME Section XI for "Additional Examinations"
NDE-R030	Use of PDI for dissimilar metal welds in lieu of Supplement 10 to Appendix VIII
NDE-R031	Use of Examination Volume as defined by N-613-1
NDE-R032	Use of PDI for Overlays in lieu of Supplement 11 to Appendix VIII
NDE-R033	Reactor Pressure Vessel Circumferential Shell Welds
PR-002	Alternative Testing for Class 2 Pressure Retaining Containment Penetrations connected to non-safety related piping systems
MC-R001	Qualification of Nondestructive Examination Personnel
MC-R002	Alternative to VT-3 for Seals and Gaskets
MC-R003	Alternative to Torque Test of Bolting
MC-R004	Preservice Examination of Reapplied Paint or Coatings
MC-R005	Visual Examination of Painted or Coated Containment Components Prior to Removal of Paint of Coatings
MC-R006	Successive examinations of Repaired Areas
MC-R007	Use of Code Case N-601
<u>CODE CASE #</u>	<u>DESCRIPTION</u>
N-198-1	Exemption From Examination for ASME Class 1 and 2 Piping Located at Containment Penetrations.
N-307-1	Revised Ultrasonic Examination Volume for Class 1 Bolting, Table IWB-2500-1, Examination Category B-G-1, When Examinations Are Conducted From the Center Drilled Hole.
N-416-1	Alternative Pressure Test Requirement for Welded Repairs, Fabrication Welds for Replacement Parts and Piping Subassemblies, or Installation of Replacement Items by Welding, Class 1, 2 and 3.
N-416-2	Alternative Pressure Test Requirement for Welded Repairs, Fabrication Welds for Replacement Parts and Piping. Includes limitation from Regulatory Guide 1.147 Revision 13, required using hold times from Section XI 1989 Edition.
N-457	Qualification Specification Notch Location for Ultrasonic Examination of Bolts and Studs.
N-460	Alternative Examination Coverage for Class 1 and 2 Welds.

**THIRD TEN YEAR INTERVAL
INSERVICE INSPECTION REPORT**
April 21, 2003 through May 3, 2005

Part K, page 2 of 2

- | | | |
|---|---|---|
| 1) Owners: Interstate Power and Light Company,
an Alliant Company
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Humbolt, IA. |
| 2) Plant: Duane Arnold Energy Center, Palo, IA. 52324 | 3) Plant Unit: #1 | |
| 4) Owners Certificate of Authorization (if required) : N/A | 5) Commercial Service Date: 02/01/75 | |
| 6) National Board Number of Unit: N/A | Gross Generating Capacity: 614 MWE | |

<u>CODE CASE #</u>	<u>DESCRIPTION</u>
N-461-1	Alternative Rules for Piping Calibration Block Thickness.
N-491-1	Alternative Rules for the Examination of Class 1, 2, 3 and MC Components Supports of Light Water Cooled Power Plants.
N-498-1	Alternative Rules for 10 Year Hydrostatic Pressure Testing for Class 1, 2 and Class 3 Systems.
N-503	Limited Certification of Nondestructive Examination Personnel Section XI, Division 1.
N-508-1	Rotation of Serviced Snubbers and Pressure Relief Valves for the Purpose of Testing Section XI, Division 1.
N-509	Alternative Rules for the Selection and Examinations of Class 1, 2, and 3 Integrally Welded Attachments, Section XI, Division 1.
N-522	Pressure Testing of Containment Piping, Section XI, Division 1
N-524	Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping, Section XI, Division 1.
N-535	Alternative Requirements for Inservice Inspection Intervals, Section XI, Division 1.
N-546	Alternative Requirements for Qualification of VT-2 Examination Personnel, Section XI, Division 1. Limitation requires initial and every 3 year written testing of examiners on Section XI knowledge, and only applies to performance of examinations.
N-552	Alternative Methods – Qualification for Nozzle Inside Radius Section from the Outside Surface, Section XI, Division 1. This Case is referenced in Final Rule dated 9/22/99, 10CFR 50.55a(b)(2)(xv)(J).
N-573	Transfer of Procedure Qualification Records Between Owners.
N-583	Annual Training Alternative.
N-598	Alternative Requirements to Required Percentages of Examination.

**ENCLOSURE 2
TO NG-05-0420**

Augmented Inspection Results
RFO 19

Page 1 of 2

System Description	Weld or Component Description	Report Number	Inspection Requirement	ISI Iso/Fig Number	Acc	Exam
Feedwater	FWA-Bore (Zone 3)	I05009	C	1.2-05	Y	UT
	FWA-Nozzle (Zones 1 & 2)	I05009	C	1.2-05	Y	UT
	FWA-Thermal Sleeve	I05010	C	1.2-05	Y	UT
	FWB-Bore (Zone 3)	I05011	C	1.2-05	Y	UT
	FWB-Nozzle (Zones 1 & 2)	I05011	C	1.2-05	Y	UT
	FWB-Thermal Sleeve	I05012	C	1.2-05	Y	UT
	FWC-Bore (Zone 3)	I05017	C	1.2-06	Y	UT
	FWC-Nozzle (Zones 1 & 2)	I05017	C	1.2-06	Y	UT
	FWC-Thermal Sleeve	I05018	C	1.2-06	Y	UT
	FWD-Bore (Zone 3)	I05019	C	1.2-06	Y	UT
	FWD-Nozzle (Zones 1 & 2)	I05019	C	1.2-06	Y	UT
	FWD-Thermal Sleeve	I05020	C	1.2-06	Y	UT
Core Spray	CSA-F002	I05029	A	1.2-07	Y	UT
	CSA-F002A	I05030	A	1.2-07	Y	UT
	CSA-F004	I05031	A	1.2-07	Y	UT
RWCU	CUB-F004	I05036	A	1.2-11B	Y	UT
	CUB-J019	I05037	A	1.2-11B	Y	UT
	CUB-J022	I05038	A	1.2-11B	Y	UT
	CUB-J025	I05039	A	1.2-11B	Y	UT
RHR	RHB-J002	I05041	A	1.2-14	Y	UT
Recirculation	RRF-F002	I05047	A	1.2-20	Y	UT
	RRG-F002	I05048	A	1.2-20	Y	UT
	RCB-F002	I05051	A	1.2-21A	Y	UT
	RCB-J044	I05052	A	1.2-21A	Y	UT
	RRB-F002-OVL	I05055	A	1.2-22	Y	UT
	RRD-F002-OVL	I05057	A	1.2-22	Y	UT
	RRD-J005	I05058	A	1.2-22	Y	UT
Jet Pump Inst	JPA-F002	I05059	A	1.2-25	Y	UT
	JPA-J003	I05060	A	1.2-25	Y	UT
	JPB-F002	I05062	A	1.2-26	Y	UT
	JPB-J003	I05063	A	1.2-26	Y	UT
Rx Vessel	CRDRL Nozzle	I05149	C	VS-01-41	Y	EVT-1
	Top Guide Latch 136°	I05149	D	VS-04-06	Y	VT-1
	Top Guide Latch 316°	I05149	D	VS-04-06	Y	VT-1
	Top Guide 46°	I05149	D	VS-04-10	Y	VT-1
	Top Guide 136°	I05149	D	VS-04-10	Y	VT-1
	Top Guide 226°	I05149	D	VS-04-10	Y	VT-1
	Top Guide 316°	I05149	D	VS-04-10	Y	VT-1
	Core Spray	I05149	F	VS-05-01	Y	EVT-1
	Core Spray Sparger	I05149	F	VS-05-02	Y	EVT-1
	Moist Sep Shrd Head	I05149	B	VS-06-02	Y	VT-1
	Moisture Separator	I05149	B	VS-06-03	Y	VT-3
	Feedwater Spargers	I05149	C	VS-09-01	Y	VT-1
	CRD Guide Tube	I05149	D	VS-12-04	Y	VT-3 /
						EVT-1

**Augmented Inspection Results
RFO 19**

Page 2 of 2

System Description	Weld or Component Description	Report Number	Inspection Requirement	ISI Iso/Fig Number	Acc	Exam
Torus	Torus Support #5	I05117	H	N/A	Y	VT-3
	Torus Support #6	I05118	H	N/A	Y	VT-3
	Earth Quake Tie #2	I05119	H	N/A	Y	VT-3
	Torus Support #7	I05120	H	N/A	Y	VT-3
	Torus Support #8	I05121	H	N/A	Y	VT-3
Instrument Air Accumulator	1T-429	I05126	H	M144-071	Y	VT-3
Fuel Oil Day Tank	1T-037B	I05127	H	M15-56	Y	VT-3

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

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

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

**ENCLOSURE 3
TO NG-05-0420**

1. Owner: IES Utilities Inc., an Alliant company, P. O. Box 351, Cedar Rapids, IA 52406 (Note 2)
(Name and address of Owner)

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

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

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

7. Components Inspected

[illegible]

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

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.

Corrected Pages (Part D, Pages 1 and 2) are attached.

11. Abstract of Conditions Noted

N/A

12. Abstract of Corrective Measures Recommended and Taken

N/A

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 7/27 2005

Signed

Gary D. Van Middlesworth By Gary D. Van Middlesworth

Certificate of Authorization No. (if applicable) NA 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 7-28 2005

JB

Inspector's Signature

Commissions NB 12329A 149639
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 D, page 1 of 5

- | | | |
|--|---|---|
| 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 | |

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-K009	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

Part D Page 2 of 5

- | | | |
|--|---|---|
| 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 | |

COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

CLASS 1 con't						
Component	Description	ISI Report	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-J026A	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	I01088	UT	1.2-28	B-D	Accepted
	VIA-D001 Inner Rad.	I01088	UT	1.2-28	B-D	Accepted
Reactor Vessel Instrument. N-12A	VIC-D001	I01089	UT	1.2-30	B-D	Accepted
	VIC-D001 Inner Rad.	I01089	UT	1.2-30	B-D	Accepted
Reactor Vessel Instrument. N-16B	VIF-D001	I01090	UT	1.2-34	B-D	Accepted
	VIF-D001 Inner Rad.	I01090	UT	1.2-34	B-D	Accepted
	VIF-F002	I01091	PT	1.2-34	B-F	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
	SHROUD LEDGE 0-180	I01095	VT-3	VS-02-11	B-N-2	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

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

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

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

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

7. Components Inspected

Corrected Page (Part D, Page 3) is attached.

[illegible]

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

FORM NIS-1 (back)

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

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

Corrected Page (Part D, Page 3) is attached.

11. Abstract of Conditions Noted

N/A

12. Abstract of Corrective Measures Recommended and Taken

N/A

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 7/27 2005

Signed [Signature] By Gary D. Van Middelkorth

Certificate of Authorization No. (if applicable) NA Expiration Date —

CERTIFICATE OF INSERVICE INSPECTION

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

By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owner's Data Report. Furthermore, neither the Inspector, nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 7-28 2005

[Signature]

Inspector's Signature

Commissions NB 123294, 149627
National Board, State, Province and No.

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

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

Part D Page 3 of 4

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

COMPONENT AND WELD EXAMINATION IDENTIFICATION RECORDS

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