## DUANE ARNOLD ENERGY CENTER

UNIT #1 PALO, IOWA

Commercial Service Date: February 1, 1975

INSERVICE INSPECTION REPORT

December 28, 1988 through September 10, 1990

Dated: November 19, 1990

## OWNER:

IOWA ELECTRIC LIGHT and POWER COMPANY P.O. Box 351 Cedar Rapids, Iowa 52406

Prepared by:	I min	Date: //-/9-90
	ISI/EC Specialist	11-202
Reviewed by:	Codes & Materials, GL	Date: 11-20-30
Concurred by:	Narindre N Sebhi	Date: 11-21-90
Approved by:	Supervising Engineer	Date: <u>  11/21/80</u>
upproved by.	Manager, Design Engineering	Date:

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# FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS As required by the Provisions of the ASME Code Rules

1. Owner _ Iowa	Electric Light & Power, (Name and Ad	P.O. Box 351, dress of Owner)	Cedar Rapids,	IA 52406 (Note
2. PlantDuane	Arnold Energy Center, 32 (Name and A	77 DAEC Road, ddress of Plant)	Palo, IA 52324	
	1 4. Owner Certif			
	spected This report include Part B (pp 1-6), P.	es a Table of	Contents (pl),	Part A (pp 1-
Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Reactor Press. Jessel (RPV)**	Chicago Bridge and Iron	3-4833	N/A	3663
Refer to Part components exa	B, Pages 1 through 6, of mined.	this report	for continuati	on of
<u></u>				

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8½ in. x 11 in., (2) information in items 1 through 6 on this data 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.

<sup>\*</sup> Part F (pp 1-5), Part G (pp 197), Part H (p 1), Part I (p 45) Part J (pp 1-6).

\*\* and items listed under RPV interior or Reactor Pressure Vessel in Part B, pages 1-6 of this report.

This form (E00029) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017

## FORM NIS-1 (back)

8. Examination Dates 12-28-88 to 09-10-90 9. Inspection Interval from 11-01-85 to 11-01-95
10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval.
SEE PART D AND PART J.
11. Abstract of Conditions Noted
SEE PART H  12. Abstract of Corrective Measures Recommended and Taken
SEE PART H
SEE PART II
We certify that the statements made in this report are correct and the examinations and corrective mea-
sures taken conform to the rules of the ASME Code, Section XI. SEE NOTE 1 BELOW.
Iowa Electric Light () Mhum
Date 11-26 19 90 Signed and Power Company By Manager, Nuclear Division
Owner Manager, Nuclear Division
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 Hartford Boiler Co. of
Hartford, CT have inspected the components described in this Owners' Data Report during the period
12-28-88 to 9-10-90, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owners' 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 Owners' 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 19 12
Commissions NB 8829(I) (N) 941-IA
Inspector's Signature National Board, State, Province and No.
Note 1: As per letter NG-89-3390, the ASME Section XI "Vessels", RHR Heat

1) Owners: Iowa Electric Light and Power Company

P.O. Box 351

Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative

Corn Belt Power Cooperative

Marion, Iowa Humboldt, Iowa

2) Plant Duane Arnold Energy Center, Palo, Iowa 52324

3) Plant Unit #1

4) Owners Certificate of Authorization (if required) N/A

5) Commercial Service Date 2-1-75

6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

### CERTIFICATE OF INSERVICE INSPECTION

#### COMPONENTS EXAMINED:

## ctor Pressure Vessel

Mufacturer: 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, From 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

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#### CERTIFICATE OF INSERVICE INSPECTION

### COMPONENTS EXAMINED:

#### Class 1 Components

Reactor Pressure Vessel Figure 1.1-2, 1.1-3, 1.1-5 and 1.1-6

Control Rod Drive Figure 1.1-8A and 1.1-8B

Main Steam Loops A, B, C and D P&ID M-103, GE Drawing 731E615 ISO Nos. 1.2-1, 1.2-2, 1.2-3,

1.2-4

Feedwater A and B P&ID M-106, M-107, Bechtel ISO

DLA-2-4, ISO No. 1.2-5

Feedwater C and D P&ID M-106, M-107, Bechtel ISO DLA-2-4, ISO No. 1.2-6

DIR 2 4, 150 NO. 1.2 0

Core Spray A P&ID M-121, Bechtel Drawings DLA-7-1 and DLA-7-2, ISO No.

1.2-7

High Pressure Coolant Injection - Steam P&ID M-122, Bechtel Drawing

DBA-3-1, ISO No. 1.2-9

High Pressure Coolant Injection - Water P&ID M-123, Bechtel Drawing DLA-1-1, ISO No. 1.2-10

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## CERTIFICATE OF INSERVICE INSPECTION

## COMPONENTS EXAMINED:

ctor Water Cleanup - Discharge	P&ID M-	127,	Bechtel	Drawing
	DCA-6-1,	ISO N	o. 1.2-11	.B

Control	Rod	Drive	Return	•	P&ID	M-1	L13,	Bech	tel	Draw	ving
					DBA-6	-1,	ISO	Nos.	1.2-	12A	and
					1.2-1	2B					

Residual	Heat	Removal	-	Head	Spray	P&ID	<b>M-</b> 1	L19,	Bec	ht	el	Dr	awing
						DRA-5	<del>-</del> 1	TSO	No	1	2 - 1	3	_

Residual Heat Removal - 18B	P&ID	M-119,	Bechtel	Drawing
	DIA-4	-1. TSO	No. 1.2-1	4

Recirculation	Pump	A and	Bypass	P&ID	M-116,	GE Dra	wing	731	3781,
				APED	B31-9(	1)-6,	ISO	No.	1.2-
				19 <b>A</b>					

Recirculation Drain Line 'A'	•	P&ID M-116, GE Drawing 731E781,	
_		APED B31-9(1)-6, ISO No. 1.2-	

Part B, Page 4

Iowa Electric Light and Power Company 1) Owners: P.O. Box 351 Cedar Rapids, Iowa 52406

> Central Iowa Power Cooperative Marion, Iowa

Corn Belt Power Cooperative

Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
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- National Board Number of Unit N/A 6)

GROSS GENERATING CAPACITY: 565 MWE

### CERTIFICATE OF INSERVICE INSPECTION

#### COMPONENTS EXAMINED:

Recirculation Manifold A and Risers E, P&ID M-116, GE Drawing 731 F, G and H APED B31-9(1)-6, ISO No. 1.

Recirculation Pump B and Bypass P&ID M-116, GE Drawing 731E781 APED B31-9-(1)-6, ISO No. 1.2-

Jet Pump Instrumentation 'A' P&ID M-115, APED B11-2655-105-4, ISO No. 1.2-25

Recirculation Pump 'A' & 'B' Details P&ID M-116, GE Drawing 731E781, APED B31-9(1)-6, Figure No.

1.3-1

Recirculation Pump 'A' Supports P&ID M-116, GE Drawing 731E781,

APED B31-9-(1)-6, Figure No.

1.3-2

Recirculation Pump 'B' Supports P&ID M-116, GE Drawing 731E781,

APED B31-9-(1)-6, Figure No.

1.3-3

Part B, Page 5 of 6

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GROSS GENERATING CAPACITY: 565 MWE

### CERTIFICATE OF INSERVICE INSPECTION

#### COMPONENTS EXAMINED:

|--|

RHR Pump Suction (S.E.)

P&ID M-120, Bechtel Drawing M-

712, ISO No. 2.2-32

RHR Pump Suction (N.W.)

P&ID M-119, Bechtel Drawing M-

713, ISO No. 2.2-33

RHR Pump Shutdown

P&ID M-119, M-120 and M-122, Bechtel Drawing M-723, ISO No.

2.2-34

RHR Heat Exchanger Discharge (S.E.)

P&ID M-120, Bechtel Drawing M-720, ISO No. 2.2-37A, ISO No.

2.2-37B

RHR Fuel Pool Cooling and Cleanup

P&ID M-119 and M-134, Bechtel Drawing HBB-24-2, 3, 4 and 5,

ISO No. 2.2-43

HPCI Turbine Steam Inlet

P&ID M-122, Bechtel Drawing M-

702, ISO No. 2.2-46

HPCI Turbine Steam Exhaust

P&ID M-122, Bechtel Drawing M-

703, ISO No. 2.2-47

Spray Suction (S.E.)

P&ID M-121, Bechtel Drawing M-

708, ISO No. 2.2-48

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GROSS GENERATING CAPACITY: 565 MWE

## CERTIFICATE OF INSERVICE INSPECTION

#### COMPONENTS EXAMINED:

Core Spray Discharge (S.E.) P&ID M-119, Bechtel Drawi

710, ISO No. 2.2-50

Main Steam Loop A P&ID M-103, Bechtel Drawing M-

716, ISO No. 2.2-53

Main Steam Loop B P&ID M-103, Bechtel Drawing M-

716, ISO No. 2.2-54

Main Steam Bypass P&ID M-103, Bechtel Drawing

EDB-6-1 and EDB-6-2, ISO No.

2.2-57

Main Steam Bypass P&ID M-103, Bechtel Drawing

EDB-6-3, ISO No. 2.2-58

Scram Discharge Header - South P&ID M-118, ISO No. 2.2-60

Part C, Page 1 of 1

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#### 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 1980 Edition through Winter 1981 Addenda, and the Duane old Energy Center updated Final Safety Analysis Report. The inspections e performed utilizing Non-Destructive Examination techniques (i.e., Ut, Pt, Mt, etc.). The examinations were conducted during the period of December 28, 1988 through September 10, 1990. The specific details and associated records of the examinations are on file at Iowa Electric Light and Power Company.

Part D pages 1 of 12

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

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GROSS GENERATING CAPACITY: 565 MWE

COMPONENT	DESCRIPTION	ISI REPORT	ISI ISO NUM.	CATEGORY	RESULTS	COMMENTS
CLASS 1 RPV INTERIOR	RPV Interior	89-439,VT-3	N/A	B-N-1	ACCEPTED	AREAS AREANI BELOW THE EAC! CORE REFERENCE 1990
	RPV INTERIOR	89-439	N/A	B-N-2	ACCEPT	RFO GE INVESSEI INSPECTION BOOI AREAS ABOVE ANI BELOW THE REACT CORE REF. 1990 RFO ( INVESSEL
						INSPECTION BOOI
REACTOR VESSEL	HCC-B002	89-23,UT-0 89-24,UT-45 89-25,UT-60	1.1-02	B-A	NRI	
	HMC-B002	89-26,UT-0 89-27,UT-45 89-28,UT-60		B-A	NRI	
	VCB-C005	89-29,UT-0 89-30,UT-45 89-31,UT-60	1.1-03	B-A	NRI	FROM STUDS 20-4
	HCC-C001	89-32,MT 89-33,UT-0 89-34,UT-45 89-35,UT-60		B-A	NRI	FROM STUDS 20-4
	HCA-H002	89-36,MT		B-H	NRI	SKIRT WELD FROM 13'-4" TO
	CLOSURE HEAD NUTS	89-37, <b>MT</b>	1.1-05	B-G-1	NRI	26'-8" NUTS 1 - 40
	CLOSURE HEAD STUDS	89-38,UT-0			NRI	STUDS 1
	CLOSURE HEAD LIGAMENTS	89-39,UT-0			NRI	LIGAMENTS 1 - 4
	CLOSURE HEAD WASHERS	89-40,VT-1			NRI	WASHERS 1 - 40

## Part D page 2 of 12

## INSERVICE INSPECTION REPORT December 28, 1988 through September 10,1990

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GROSS GENERATING CAPACITY: 565 MWE

 COMPONENT	DESCRIPTION	ISI	REPORT	ISI ISO NUM.	CATEGORY	RESULTS	COMMENTS
RPV (cont)	VESSEL STABILIZER	89-	41,MT		в-н	NRI	
	WELD-90 DEG VID-D001	89-1 89-1	52,UT-70 53,UT-0 54,UT-45	1.1-06	B-D	NRI	
	JPA-D001	89-1 89-1 89-1	55,UT-60 56,UT-70 57,UT-0 58,UT-45			NRI	
	RRF-D001	89-6 89-6	59,UT-60 60,UT-70 61,UT-0 62,UT-45			NRI	
	RCA-D001	89-6	63,UT-60 64,UT-70 65,UT-0 66,UT-45			NRI	
	CRA-D001	89-6 89-6	67,UT-60 69,UT-0 70,UT-45 71,UT-70			NRI	
	HSE-DO01	89-1 89-1	72,UT-70 73,UT-0 74,UT-45 75,UT-60			NRI	
CONTROL ROD DRIVE	CRD FLANGE 1R215(06-23)	90-2	29,VT-1	1.1-08A,B	B-G-2	ACCEPTED	
BOLTING, STUDS	CRD FLANGE	90-3	31,VT-1			ACCEPTED	
 AND NUTS	1R215(34-31) CRD FLANGE	90-3	32, <b>VT-</b> 1			ACCEPTED	
	1R215(10-19) CRD FLANGE	90-3	33, <b>VT-</b> 1			ACCEPTED	
	1R215(10-35) CRD FLANGE 1R215(34-15)	90-3	34, <b>VT</b> -1			ACCEPTED	
	CRD FLANGE 1R215(42-19)	90-3	35,VT-1			ACCEPTED	
	,						

## Part D page 3 of 1

## INSERVICE INSPECTION REPORT December 28, 1988 through September 10,1990

Central Iowa Power Cooperative Marion, Iowa

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Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
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GROSS GENERATING CAPACITY: 565 MWE

COMPONENT	DESCRIPTION	ISI REPORT	ISI ISO NUM.	CATEGORY	RESULTS	COMMENTS
CRD BOLTING	CRD FLANGE	90-36,VT-1			ACCEPTED	
(cont)	1R215(02-19) CRD FLANGE	90-37,VT-1			ACCEPTED	
	1R215(06-11) CRD FLANGE	90-38,VT-1			ACCEPTED	
	1R215(10-39) CRD FLANGE	90-39,VT-1			ACCEPTED	
•	1R215(14-15) CRD FLANGE	90-41,VT-1			ACCEPTED	
	1R215(30-23) CRD FLANGE	90-42,VT-1			ACCEPTED	
	1R215 (38-11) CRD FLANGE	90-43,VT-1			ACCEPTED	
•	1R215 (42-43) CRD FLANGE	90-44,VT-1			ACCEPTED	
	1R215 (02-23) CRD FLANGE	90-45,VT-1			ACCEPTED	
	1R215(10-11) CRD FLANGE 1R215(10-27)	90-46,VT-1			ACCEPTED	
	CRD FLANGE 1R215(22-23)	90-47,VT-1			ACCEPTED	
	CRD FLANGE 1R215(26-19)	90-48,VT-1			ACCEPTED	
MAIN STEAM 'A'	MSA-K035	89-76,VT-3/4	1.2-01	F-C	ACCEPTED	
•	CV-4412	90-246,VT-1		B-G-2	ACCBPTED	
	ov. 4412	90-247,VT-3		B-M-2	ACCEPTED	
	CV-4413	90-248,VT-1 90-249,VT-3		B-G-2 B-M-2	ACCEPTED	
	PSV-4400	90-187,VT-1		B-G-2	ACCEPTED	
	130-4400	90-188,VT-3		B-M-2	ACCEPTED	
	PSV-4401	90-189, VT-1		B-G-2	ACCEPTED	4
	100	90-191,VT-3		B-M-2	ACCEPTED	
MAIN STEAM 'B'	MSB-KO40	89-446,VT3/4	1.2-02	F-C	ACCEPTED	
	CV-4415	89-452,VT-1		B-G-2	ACCEPTED	
		89-451,VT-3		B-M-2	ACCEPTED	
	CV-4416	90-252,VT-1		B-G-2	ACCEPTED	
,		90-253,VT-3		B-M-2	ACCEPTED	

#### INSERVICE INSPECTION REPORT Part D page 4 of 12 December 28, 1988 through September 10,1990

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GROSS GENERATING CAPACITY: 565 MWE

COMPONENT	DESCRIPTION	ISI REPORT	ISI ISO NUM.	CATEGORY	RESULTS	COMMENTS
SB (cont)	PSV-4402	90-195,VT-1 90-272,VT-3	e.	B-G-2 B-G-2	ACCEPTED ACCEPTED	
,	PSV-4403	90-008,VT-1 90-009,VT-3		B-G-2 B-M-2	ACCEPTED ACCEPTED	
MAIN STEAM 'C'	MSC-J009	89-78, <b>mt</b> 89-79,UT-45	1.2-03	B-J B-J	ACCEPTED ID ROOT	GEOMETRY
	MSC-J009-OA	89-80,MT 89-81,UT-45		B-J B-J	NRI NRI	
	MSC-J009-IA	89-82,MT 89-83,UT-45		B-J B-J	NRI NRI	
	MSC-J010	89-84,MT 89-85,UT-45		B-J B-J	NRI NRI	
	MSC-K011A	89-86,MT 89-87,VT-3/4		B-K-1 F-C	NRI ACCEPTED	
	MSC-R011B MSC-J015-OA	89-89, VT-3/4 89-90, MT		F-C B-J	ACCEPTED NRI	
	MSC-J015-IA	89-91,UT-45 89-92,MT		B-J B-J	NRI	
	MSC-J027	89-93,UT-45 89-94,MT		B-J	NRI NRI	
	CV-4419	89-95,UT-45		B-J B-J	NRI NRI	,
		89-454,VT-1 89-453,VT-3		B-G-2 E-M-2	ACCEPTED ACCEPTED	
	CV-4418	90-254,VT-1 90-255,VT-3		B-G-2 H-M-2	ACCEPTED ACCEPTED	
	PSV-4404	90-010,VT-1 90-011,VT-3		B-G-2 B-M-2	ACCEPTED ACCEPTED	
	PSV-4405	90-197,VT-3 90-186,VT-3 90-26,VT-1		B-M-2 B-M-2 B-G-2	ACCEPTED ACCEPTED	
MAIN STEAM 'D'	MSD-K018		1.2-04	B-G-2 B-K-1	ACCEPTED NRI	
	MSD-J031-0A	89-97,VT-3/4 89-98,MT		F-C	ACCEPTED NRI	
	MSD-J031-IA	89-99,UT-45 89-100,MT		B-J	NRI NRI	
	MSD-J032	89-101,UT-45 89-102,MT 89-103,UT-45		B-J B-J	NRI NRI NRI	

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GROSS GENERATING CAPACITY: 565 MWE

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COMPONENT	DESCRIPTION	ISI REPORT	ISI ISO NUM.	CATEGORY	RESULTS	COMMENTS
MSD (cont)	MSD-J032-OA	89-104,MT		B-J	NRI	
		89-105,UT-45		B-J	NRI	
	MSD-J032-IA	89-106,MT		B-J B-J	NRI	
	MSD-J016	89-107,UT-45 89-108,MT		B-J	NRI NRI	
	M3D-0016	89-109,UT-45		B-J	NRI	
	CV-4420	90-258,VT-1		<b>E-G-</b> 2	ACCEPTED	
, ,		90-259, VT-3		B-M-2		REPAIRED AREAS ACCEPTED UNDER 90-327
	CV-4421	90-260, VT-1		B-G-2	ACCEPTED	30-32 <i>1</i>
	CV-4421	90-261,VT-3		B-M-2	ACCEPTED	
	PSV-4406	90-199,VT-3		B-M-2	ACCEPTED	
		90-198, VT-1		B-G-2	ACCEPTED	
		89-15, VT-1		B-G-2	ACCEPTED	
	PSV-4407	89-19, <b>VT-</b> 3		B-M-2	ACCEPTED	
		90-201,VT-3		B-M-2	ACCEPTED	
		90-200,VT-1 89-18,VT-1		B-G-2 B-G-2	ACCEPTED ACCEPTED	
FEEDWATER A & E	3 V-14-3	90-164,VT-3	1.2-05	B-M-2	ACCEPTED	
FEEDWATER C & D	FWC-J027	89-110,MT	1.2-06	B-J	NRI	
		89-111,UT-45		B-J	NRI	
	FWC-K026A	89-112,VT3/4		F-C	ACCEPTED	
	FWC-K020	89-113,VT3/4		F-C	ACCEPTED	
	FWC-K018	89-114,VT3/4		F-C	ACCEPTED	
	FWC-J012	89-115,MT		B-J	NRI	
		89-116,UT-45		B-J	ROOT	
	FWD 7016	00 117 100			GEO.	
	FWD-J016	89-117,MT 89-118,UT-45		B-J B-J	NRI ROOT	
		03-110,01-43		B-0	GEO.	
	FWD-K014	89-119,VT3/4		F-C	ACCEPTED	
	FWC-J037	89-120,MT		B-J	NRI	
		89-121,UT-45		B-J	NRI	
	V-14-1	90-22, <b>VT</b> -3		B-M-2	ACCEPTED	
CORE SPRAY A	CSA-J023	89-129,MT	1.2-07	B-J	NRI	
		89-130,UT-45		B-J	NRI	

Part D page 6 of 12

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Marion, Iowa

Corn Belt Power Cooperative

Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

## Component and Weld Examinations Identification Records

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COMPONENT	DESCRIPTION	ISI REPORT	ISI ISO NUM.	CATEGORY	RESULTS	COMMENTS
			• 5			
cSA (cont)	CSA-J022	89-131,MT		B-J	NRI	
(0020)	CDR 0022	89-132,UT-45	. 1	B-J	NRI	
	CSA-K017	89-133,VT3/4		F-C	ACCEPTED	
	oon kor,	07-133,113/4		r-C	ACCEPTED	
HPCI-STEAM	MO-2238	89-08,VT-3	1.2-09	B-M-2	ACCEPTED	
•	MO-2239	90-06,VT-3		B-M-2	ACCEPTED	
WDAT_WAMPD	VO-2212					
HPCI-WATER	MO-2312	89-20, VT-3	1.2-10	B-M-2	ACCEPTED	
	V23-0049	89-459,VT-3		B-M-2	ACCEPTED	
RWCU-DISCHARGE	CUB-KO24	89-144,VT3/4	1.2-11B	F-C	ACCEPTED	
	CUB-K018	89-145,VT3/4		F-C	ACCEPTED	
	CUB-J017	89-146,PT		B-J	ACCEPTED	
	•	89-135,UT-45		B-J	NRI	
CRD-RETURN	CRA-KO17AA	89-152,VT3/4	1 2-123	F-C	1.0000000	
3.3	CRA-KO17AB	89-153, VT3/4	1.2-12A	F-C	ACCEPTED ACCEPTED	
	CRA-FOO4	89-154,PT		B-F	NRI	
		89-147,UT-45		B-F	NRI	
		89-148,UT-45		B-F	NRI	
	CRA-F002	89-155,PT		B-F	NRI	
		89-150,UT-45		B-F	NRI	
		89-151,UT-45		B-F	NRI	
	CRA-K041D	89-156,VT3/4		F-C	ACCEPTED	
	CRA-KO41A	89-157,VT3/4		F-C	ACCEPTED	
	CRA-J041	89-158,MT		B-J	NRI	
	CRA-J040	89-159,MT		B-J	NRI	
	CRA-J034	89-160,MT		B-J	NRI	
RHR-HEADSPRAY	RHA-J002	89-161,MT	1.2-13	B-J	VD T	
		89-162,UT-45	1.4-13	B-J	NRI	
		07-102/01-43		<b>B-</b> J	NRI	•
R-SDC	RHB-J001-LS	89-166,PT	1.2-14	B-J	NRI	
	222 2000	89-167,UT-45		<b>B</b> -J	NRI	
	RHB-F003	89-168,PT		B-F	NRI	
		89-169,UT-45		B-F	NRI	
	222 2004	89-170,UT-45		B-F	NRI	
	RHB-KOO4	89-171,VT3/4		F-C	ACCEPTED	
•	RHB-KOO9	89-172,VT3/4		F-C	ACCEPTED	

## Part D page 7 of 12

## INSERVICE INSPECTION REPORT December 28, 1988 through September 10,1990

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Marion, Iowa

Corn Belt Power Cooperative

Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commerial Service Date 2-1-75
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

RHR-SDC (cont)  RHR-J016  89-174,UT-45  89-175,PT  89-175,PT  89-175,PT  89-175,PT  89-177,UT-45  RHC-J024  89-176,MT  89-177,UT-45  RHC-J023  89-177,UT-45  RHC-J023  89-177,UT-45  RHC-M16A  89-177,UT-45  RHC-M16A  89-179,UT-45  RHC-M16A  89-181,VT3/4  F-C  ACCEPTED  RECIRC PUMP VALVE BYPASS  'A'  REA-FIG-BOLTING  RBA-FIG-BOLTING  RBA-FIG-BOLTING  RBA-FIG-BOLTING  89-202,VT3/4  RBA-K005A  89-202,VT3/4  RBA-K005B  89-203,VT3/4  F-C  RCA-J004  89-203,VT3/4  RCA-J004  89-206,UT-45  RCA-J004  89-206,UT-45  RCA-J004  89-206,UT-45  RCA-J004  89-206,UT-45  RCA-J004-OA  89-212,UT-45  RCA-K017  89-213,PT  RCA-K017  89-213,PT  RCA-K018  RCA-K018  RCA-K019  RCA-K018  89-210,UT-45  RCA-K019  RCA-K018  89-210,UT-45  RCA-K019  RCA-K019  RCA-K018  89-210,UT-45  RCA-K019  RCA-K019  RCA-K019  RCA-K019  RCA-K019  RCA-K019  RCA-K018  RCA-K019  RCA	COMPONENT	DESCRIPTION	ISI REPORT	ISI ISO NUM.	CATEGORY	RESULTS	COMMENTS
RHR-20A  RHC-J024  RHC-J024  RHC-J024  RHC-J023  RHC-J023  RHC-K016A  RHC-K016A  RHC-K016A  RHC-K016B  RHC-L-K016B  RHC-L-K016B  RHC-L-K016B  RHC-L-K016B  RHC-L-K016	RHR-SDC (cont)	RHR-J016	89-173,MT				
RHR-20A  RHC-J024  RHC-J023  RHC-J023  RHC-K016A  RHC-K016A  RHC-K016 89-180, VT3/4  RHC-K016 89-180, VT3/4  RHC-K016 89-181, VT3/4  RHC-K016 89-181, VT3/4  RHC-K016 89-181, VT3/4  RHC-K016 89-181, VT3/4  RHC-K016 RHC-K016  RHC-K016 RHC-K016		DED 7003			-		
RHR-20A  RHC-J024  89-176,MT  89-177,UT-45  RHC-J023  89-178,MT  89-179,UT-45  RHC-K016A  89-180,VT3/4  RHC-K016  RHC-K016  89-181,VT3/4  RHC-K016  RHC-K016  89-181,VT3/4  RHC-K016  RHC-		RHB-3002					
RECIRC PUMP VALVE BYPASS 'A'  RECIRC PUMP VALVE BYPASS 'A'  RECIRC RECIRC RCA-5003 89-200, VT-1 1.2-19A B-F NRI RHA-8005A 89-203, VT3/4 F-C ACCEPTED  RECIRC RCA-5016 89-200, VT-1 1.2-19A B-F NRI RHA-8005A 89-202, VT3/4 F-C ACCEPTED  RECIRC RCA-5002 89-204, PT 1.2-19A B-F NRI RCA-J004-OA 89-205, PT B-J NRI RCA-J004-OA 89-205, PT B-J NRI RCA-J004-IA 89-219, UT-45 B-J NRI RCA-K05A 89-213, VT-45 B-J NRI RCA-K05A 89-213, VT-45 B-J NRI RCA-K05A 89-205, PT B-J NRI RCA-K05A 89-205, PT B-J NRI RCA-J004-IA 89-219, UT-45 B-J NRI RCA-K05A 89-210, UT-45 B-J NRI RCA-K05A 89-213, VT-45 B-J NRI RCA-K05A 89-213, VT-3/4 F-C ACCEPTED RCA-K05A 89-217, VT3/4 F-C ACCEPTED RCA-K05A 89-219,			07-103,01-43		B-0	NKT	
RECIRC PUMP VALVE BYPASS 'A'  RECIRC PUMP VALVE BYPASS 'A'  RECIRC RECIRC RECAPOLA 89-200, VT-1 1.2-19A B-F NRI RECIRC RECIRC RECAPOLA 89-201, VT-3 B-J NRI RECIRC RECIRC RECAPOLA 89-201, VT-45 B-J NRI RECIRC RECIRC RECIRC 89-201, VT-1 1.2-19A B-G-2 ACCEPTED RECIRC REC	RHR-20A	RHC-J024	89-176,MT	1.2-15	B-J	NRI	
RECIRC PUMP VALVE BYPASS 'A' 89-102 89-200, VT-1 1.2-19A B-F MRI RB-J MRI RB-SUCTION 'A' 89-181, VT3/4 F-C ACCEPTED RB-J MRI RB-FLG-BOLTING 89-200, VT-1 1.2-19A B-G-2 ACCEPTED RB-J MRI RB-J002 89-201, PT B-J MRI RB-K005A 89-202, VT3/4 F-C ACCEPTED RB-K005B 89-203, VT3/4 F-C ACCEPTED RB-K005B 89-203, VT3/4 F-C ACCEPTED RB-K005A 89-203, VT3/4 F-C ACCEPTED RB-J MRI RB-K005A 89-203, VT3/4 F-C ACCEPTED RB-F ID-GEO. RCA-J003-LS 89-206, UT-45 B-J MRI RCA-J004 89-207, PT B-J MRI RCA-J004 89-207, PT B-J MRI RCA-J004-OA 89-209, PT B-J MRI RCA-J004-OA 89-209, PT B-J MRI RCA-J004-IA 89-211, PT B-J MRI RCA-J004-IA 89-212, UT-45 B-J MRI RCA-J004-IA 89-211, PT B-J MRI RCA-K017 89-212, UT-45 B-J MRI RCA-K017 89-212, UT-45 B-J MRI RCA-K017 89-213, PT B-K-1 MRI RCA-K026 89-216, PT B-K-1 MRI RCA-K026 89-217, VT3/4 F-C ACCEPTED RCA-K026 89-217, VT3/4 F-C ACCEPTED RCA-K035 89-218, VT3/4 F-C ACCEPTED RCA-K035 89-219, PT B-J MRI RCA-K035 89-218, PT3/4 F-C ACCEPTED RCA-K035 89-218, PT3/4 F-C ACCEPTED RCA-K035 89-218							BORE AND O.D.
RHC-K016A 89-189,VT3/4 P-C ACCEPTED REC-K016 89-181,VT3/4 P-C ACCEPTED RECIRC PUMP RBA-FLG-BOLTING 89-200,VT-1 1.2-19A B-G-2 ACCEPTED RBA-FLG-BOLTING 89-201,PT B-J NRI RBA-FLG-BOLTING 89-201,PT B-J NRI RBA-K005A 89-202,VT3/4 P-C ACCEPTED RECIRC. RCA-F002 89-204,PT 1.2-19A B-F ID-GEO. RCA-J003-LS 89-192,UT-RL B-F ID-GEO. RCA-J003-LS 89-206,UT-45 B-J NRI RCA-J004 89-207,PT B-J NRI RCA-J004 89-207,PT B-J NRI RCA-J004-DA 89-209,PT B-J NRI RCA-J004-DA 89-210,UT-45 B-J NRI RCA-J004-DA 89-210,UT-45 B-J NRI RCA-J004-DA 89-211,PT B-J NRI RCA-J004-DA 89-211,PT B-J NRI RCA-J004-DA 89-211,PT B-J NRI RCA-J004-DA 89-212,UT-45 B-J NRI RCA-J004-DA 89-211,PT B-J NRI RCA-J004-DA 89-211,PT B-J NRI RCA-K017 89-214,VT3/4 F-C ACCEPTED RCA-K026 89-214,VT3/4 F-C ACCEPTED RCA-K026 89-217,VT3/4 F-C ACCEPTED RCA-K026 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI RCA-J018 RCA-J018 89-219,PT B-J NRI RCA-J018 RCA-J018 RCA-J018 RCA-J018 RCA-			·				
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RHC-K016 89-181,VT3/4 F-C ACCEPTED  RHR-20B MO-1905 89-449,VT-3 1.2-16 B-M-2 ACCEPTED  RECIRC PUMP VALVE BYPASS RBA-J002 89-201,PT B-J NRI RHA-K005A 89-202,VT3/4 F-C ACCEPTED  RECIRC. RCA-F002 89-204,PT 1.2-19A B-F NRI SUCTION 'A'  RECA-J003-LS 89-205,PT B-J NRI RCA-J004-OA 89-207,PT B-J NRI RCA-J004-OA 89-209,PT B-J NRI RCA-J004-IA 89-211,PT B-J NRI RCA-K017 89-212,VT-45 B-J NRI RCA-K017 89-212,VT-45 B-J NRI RCA-K018 RCA-K017 89-212,VT-45 B-J NRI RCA-K018 RCA-K018 89-214,VT3/4 F-C ACCEPTED RCA-K018 89-214,VT3/4 F-C ACCEPTED RCA-K035 89-216,VT-3 B-L-2 ACCEPTED RCA-K035 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-217,VT3/4 F-C ACCEPTED RCA-J018 89-219,VT B-J NRI RCA-J018 89-219,VT B-J RCA-J018 B-J NRI RCA-J018 89-219,VT B-J RCA-J018 B-J NRI RCA-J018 RCA-J018 RCA-J018 RCA-J018 RCA-J018 RCA-J018 RCA-J018 RCA-J018 RCA-J018 RCA-J0					B-J	NRI	
RECIRC PUMP VALVE BYPASS RBA-FLG-BOLTING 89-200, VT-1 1.2-19A B-G-2 ACCEPTED RBA-J002 89-201, PT B-J NRI RHA-K005A 89-202, VT3/4 F-C ACCEPTED RBA-K005B 89-203, VT3/4 F-C ACCEPTED RBA-K005B 89-203, VT3/4 F-C ACCEPTED RCA-J003-LS 89-205, PT B-J NRI RCA-J004 89-205, PT B-J NRI RCA-J004-OA 89-209, PT B-J NRI RCA-J004-IA 89-211, PT B-J NRI RCA-J004-IA 89-211, PT B-J NRI RCA-K017 89-214, VT3/4 F-C ACCEPTED RCA-K026 RCA-K035 89-214, VT3/4 F-C ACCEPTED RCA-K035 89-217, VT3/4 F-C ACCEPTED RCA-S018 89-217, VT3/4 F-C ACCEPTED RCA-S018 89-217, VT3/4 F-C ACCEPTED RCA-K035 89-218, VT3/4 F-C ACCEPTED RCA-S018 89-217, VT3/4 F-C ACCEPTED RCA-S018 89-217, VT3/4 F-C ACCEPTED RCA-S035 89-218, VT3/4 F-C ACCEPTED RCA-S035 89-218, VT3/4 F-C ACCEPTED RCA-S018 89-219, PT B-J NRI RCA-J018 89-219, PT B-J NRI RCA-J018 89-219, PT B-J NRI RCA-J018 89-219, VT3/4 F-C ACCEPTED R						ACCEPTED	
RECIRC PUMP VALVE BYPASS	•	RHC-K016	89-181,VT3/4		F-C	ACCEPTED	
VALVE BYPASS RBA-J002 89-201,PT 8-J NRI RHA-K005A 89-183,UT-45 8-J NRI RHA-K005B 89-203,VT3/4 F-C ACCEPTED  RECIRC. RCA-F002 89-204,PT 1.2-19A 8-F NRI 89-192,UT-RL 8-F ID-GEO. RCA-J003-LS 89-205,PT 8-J NRI RCA-J004 89-207,PT 8-J NRI RCA-J004 89-208,UT-45 8-J NRI RCA-J004-OA 89-209,PT 8-J NRI RCA-J004-IA 89-211,PT 8-J NRI RCA-J004-IA 89-212,UT-45 8-J NRI RCA-K017 89-213,PT 8-K-1 NRI RCA-K017 89-213,PT 8-K-1 NRI RCA-K018 89-215,VT-3 8-L-2 ACCEPTED RCA-K026 89-216,PT 8-L-1 NRI RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT 8-J NRI RCA-J018 89-219,PT 8-J NRI RCA-J018 89-219,PT 8-J NRI RCA-J018 89-197,UT-45 8-J NRI RCA-J018 RCA-J018 89-197,UT-45 8-J NRI RCA-J018 RCA-J018 RCA-J018 B-J NRI RCA-J0197,UT-45 B-J NRI RCA-J018 RCA-J018 RCA-J018 B-J NRI RCA-J0197,UT-45 B-J NRI RCA-J018 RCA-J018 RCA-J018	RHR-20B	MO-1905	89-449,VT-3	1.2-16	B-M-2	ACCEPTED	
VALVE BYPASS RBA-J002 89-201,PT 8-J NRI RHA-K005A 89-183,UT-45 8-J NRI RHA-K005B 89-203,VT3/4 F-C ACCEPTED  RECIRC. RCA-F002 89-204,PT 1.2-19A 8-F NRI 89-192,UT-RL 8-F ID-GEO. RCA-J003-LS 89-205,PT 8-J NRI RCA-J004 89-207,PT 8-J NRI RCA-J004 89-208,UT-45 8-J NRI RCA-J004-OA 89-209,PT 8-J NRI RCA-J004-IA 89-211,PT 8-J NRI RCA-J004-IA 89-212,UT-45 8-J NRI RCA-K017 89-213,PT 8-K-1 NRI RCA-K017 89-213,PT 8-K-1 NRI RCA-K018 89-215,VT-3 8-L-2 ACCEPTED RCA-K026 89-216,PT 8-L-1 NRI RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT 8-J NRI RCA-J018 89-219,PT 8-J NRI RCA-J018 89-219,PT 8-J NRI RCA-J018 89-197,UT-45 8-J NRI RCA-J018 RCA-J018 89-197,UT-45 8-J NRI RCA-J018 RCA-J018 RCA-J018 B-J NRI RCA-J0197,UT-45 B-J NRI RCA-J018 RCA-J018 RCA-J018 B-J NRI RCA-J0197,UT-45 B-J NRI RCA-J018 RCA-J018 RCA-J018	RECIRC PUMP	RBA-FLG-BOLTING	89-200 . VT-1	1.2-19A	B-G-2	ACCEPTED	
RHA-KOO5A 89-202,VT3/4 F-C ACCEPTED RBA-KOO5B 89-203,VT3/4 F-C ACCEPTED RBA-KOO5B 89-203,VT3/4 F-C ACCEPTED RBA-KOO5B 89-203,VT3/4 F-C ACCEPTED RCA-FOO2 89-204,PT 1.2-19A B-F NRI 89-192,UT-RL B-F ID-GEO.  RCA-JOO3-LS 89-205,PT B-J NRI 89-206,UT-45 B-J NRI 89-206,UT-45 B-J NRI 89-208,UT-45 B-J NRI 89-208,UT-45 B-J NRI 89-208,UT-45 B-J NRI 89-210,UT-45 B-J NRI 89-210,UT-45 B-J NRI 89-212,UT-45 B-J NRI 89-214,VT3/4 F-C ACCEPTED RCA-KO17 89-213,VT B-K-1 NRI 89-216,PT B-K-1 NRI 89-216,PT B-K-1 NRI 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-KO35 89-218,VT3/4 F-C ACCEPTED RCA-JO18 89-219,PT B-J NRI 89-197,UT-45 B-J NRI 89-197,UT-45 B-J NRI							
RECIRC. SUCTION 'A'  RECIRC. SUCTION 'A'  RCA-F002  RCA-J003-LS  89-204,PT  89-192,UT-RL  89-205,PT  89-206,UT-45  89-206,UT-45  89-206,UT-45  89-208,UT-45  89-208,UT-45  89-209,PT  89-200,UT-45  89-210,UT-45  89-210,UT-45  89-210,UT-45  89-212,UT-45  89-212,UT-45  89-212,UT-45  89-212,UT-45  89-212,UT-45  89-212,UT-45  89-212,UT-45  89-213,PT  89-214,VT3/4  FCC  ACCEPTED  RCA-K017  89-214,VT3/4  FCC  ACCEPTED  RCA-K026  89-216,PT  89-217,VT3/4  FCC  ACCEPTED  RCA-K035  89-218,VT3/4  FCC  ACCEPTED  RCA-J018  89-219,PT  B-J  NRI  89-217,VT3/4  FCC  ACCEPTED  RCA-GOSS  RCA-J018  89-219,PT  B-J  NRI  89-217,VT3/4  FCC  ACCEPTED  RCA-J018  89-219,PT  B-J  NRI  89-197,UT-45  B-J  NRI  89-197,UT-45  B-J  NRI	·		89-183.UT-45				
RECIRC.  RCA-F002  RCA-J003-LS  RCA-J003-LS  RCA-J004  RCA-J004-OA  RCA-J004-IA  RCA-J004-IA  RCA-J004-IA  RCA-K017  RCA-K017  RCA-K016  RCA-K016  RCA-K026  RCA-K026  RCA-K026  RCA-K026  RCA-K026  RCA-K026  RCA-K026  RCA-K026  RCA-K026  RCA-K035  RCA-J018		RHA-KOO5A	89-202.VT3/4				
SUCTION 'A'  RCA-J003-LS 89-205,PT B-J NRI 89-206,UT-45 B-J NRI RCA-J004 89-207,PT B-J NRI RCA-J004-OA 89-209,PT B-J NRI RCA-J004-OA 89-209,PT B-J NRI RCA-J004-IA 89-211,PT B-J NRI RCA-K017 89-212,UT-45 B-J NRI RCA-K017 89-213,PT B-K-1 NRI RCA-K017 89-214,VT3/4 F-C ACCEPTED RCA-K026 89-216,PT B-K-1 NRI RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI			89-203,VT3/4				
SUCTION 'A'  RCA-J003-LS 89-205,PT B-J NRI 89-206,UT-45 B-J NRI RCA-J004 89-207,PT B-J NRI RCA-J004-OA 89-209,PT B-J NRI RCA-J004-OA 89-209,PT B-J NRI RCA-J004-IA 89-211,PT B-J NRI RCA-K017 89-212,UT-45 B-J NRI RCA-K017 89-213,PT B-K-1 NRI RCA-K017 89-214,VT3/4 F-C ACCEPTED RCA-K026 89-216,PT B-K-1 NRI RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI							
RCA-J003-LS 89-205,PT B-J NRI 89-206,UT-45 B-J NRI RCA-J004 89-207,PT B-J NRI 89-208,UT-45 B-J NRI RCA-J004-OA 89-209,PT B-J NRI 89-210,UT-45 B-J NRI RCA-J004-IA 89-211,PT B-J NRI RCA-K017 89-212,UT-45 B-J NRI RCA-K017 89-213,PT B-K-1 NRI 89-214,VT3/4 F-C ACCEPTED 1P201A-CASE INT 89-215,VT-3 B-L-2 ACCEPTED RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-K035 89-219,PT B-J NRI 89-197,UT-45 B-J NRI		RCA-F002	89-204,PT	1.2-19A	_		
89-206,UT-45  RCA-J004 89-207,PT B-J NRI 89-208,UT-45 B-J NRI RCA-J004-OA 89-209,PT B-J NRI 89-210,UT-45 B-J NRI RCA-J004-IA 89-211,PT B-J NRI RCA-K017 89-212,UT-45 B-J NRI RCA-K017 89-213,PT B-K-1 NRI 89-214,VT3/4 F-C ACCEPTED RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 RCA-K035 RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI	SUCTION 'A'						
RCA-J004 89-207,PT B-J NRI 89-208,UT-45 B-J NRI RCA-J004-OA 89-209,PT B-J NRI 89-210,UT-45 B-J NRI RCA-J004-IA 89-211,PT B-J NRI 89-212,UT-45 B-J NRI RCA-K017 89-213,PT B-K-1 NRI 89-214,VT3/4 F-C ACCEPTED 1P201A-CASE INT 89-215,VT-3 B-L-2 ACCEPTED RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI		RCA-J003-LS			B-J		
89-208,UT-45  RCA-J004-OA  89-209,PT  89-210,UT-45  B-J  NRI  RCA-J004-IA  89-211,PT  B-J  NRI  89-212,UT-45  B-J  NRI  RCA-K017  89-213,PT  B-K-1  1P201A-CASE INT  89-214,VT3/4  F-C  RCA-K026  89-215,VT-3  RCA-K026  89-217,VT3/4  F-C  RCA-K035  RCA-K035  RCA-J018  89-219,PT  B-J  NRI  89-197,UT-45  B-J  NRI					B-J	NRI	
RCA-J004-OA 89-209,PT B-J NRI 89-210,UT-45 B-J NRI RCA-J004-IA 89-211,PT B-J NRI 89-212,UT-45 B-J NRI RCA-K017 89-213,PT B-K-1 NRI 89-214,VT3/4 F-C ACCEPTED 1P201A-CASE INT 89-215,VT-3 B-L-2 ACCEPTED RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI		RCA-J004			B−J	NRI	
89-210,UT-45  RCA-J004-IA  89-211,PT  89-212,UT-45  RCA-K017  89-213,PT  89-214,VT3/4  F-C  1P201A-CASE INT  89-215,VT-3  RCA-K026  89-216,PT  89-217,VT3/4  F-C  RCA-K035  RCA-K035  89-218,VT3/4  RCA-J018  89-219,PT  89-197,UT-45  B-J  RCA-CEPTED  RCA-CEPTED					B-J	NRI	
RCA-J004-IA 89-211,PT B-J NRI 89-212,UT-45 B-J NRI RCA-K017 89-213,PT B-K-1 NRI 89-214,VT3/4 F-C ACCEPTED 1P201A-CASE INT 89-215,VT-3 B-L-2 ACCEPTED RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI		RCA-J004-OA			B-J	NRI	
89-212,UT-45  RCA-K017  89-213,PT  89-214,VT3/4  F-C  1P201A-CASE INT  89-215,VT-3  RCA-K026  89-216,PT  89-217,VT3/4  F-C  RCA-K035  89-218,VT3/4  F-C  RCA-J018  89-219,PT  89-197,UT-45  B-J  NRI  RCA-CEPTED			89-210,UT-45		B-J	NRI	
RCA-K017 89-213,PT B-K-1 NRI 89-214,VT3/4 F-C ACCEPTED 1P201A-CASE INT 89-215,VT-3 B-L-2 ACCEPTED RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI		RCA-J004-IA	89-211,PT		B-J	NRI	
89-214,VT3/4 F-C ACCEPTED 1P201A-CASE INT 89-215,VT-3 B-L-2 ACCEPTED RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI			89-212,UT-45		B-J	NRI	
1P201A-CASE INT 89-215,VT-3 RCA-K026 89-216,PT 89-217,VT3/4 RCA-K035 89-218,VT3/4 RCA-J018 89-219,PT 89-197,UT-45 B-J NRI 89-197,UT-45 B-J NRI		RCA-K017	89-213,PT		B-K-1	NRI	
RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI			89-214, VT3/4		F-C	ACCEPTED	
RCA-K026 89-216,PT B-K-1 NRI 89-217,VT3/4 F-C ACCEPTED RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI		1P201A-CASE INT	89-215, VT-3		B-L-2	ACCEPTED	
89-217, VT3/4 F-C ACCEPTED  RCA-K035 89-218, VT3/4 F-C ACCEPTED  RCA-J018 89-219, PT B-J NRI  89-197, UT-45 B-J NRI			89-216,PT				
RCA-K035 89-218,VT3/4 F-C ACCEPTED RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI							
RCA-J018 89-219,PT B-J NRI 89-197,UT-45 B-J NRI		RCA-K035	89-218, VT3/4	•			
89-197, UT-45 B-J NRI		RCA-J018					
		RCA-J019	89-220,PT		B-J	NRI	

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INSERVICE INSPECTION REPORT
December 28, 1988 through September 10,1990

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Commarion, Iowa Hu

Corn Belt Power Cooperative

Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

COMPONENT	DESCRIPTION	ISI REPORT	ISI ISO NUM.	CATEGORY	RESULTS	COMMENTS
RECIRC	RDA-J006	89-221,PT	1.2-19B	B-J	NRI	
DRAIN 'A'	RDA-J007	89-222,PT	•	B-J	NRI	
RHCIRC MANIFOLD	RMA-J007	89-241.PT	1.2-20	B-J	NRI	
'A' SIDE		89-223,UT-45		B-J	NRI	
	RMA-K003	89-242,VT3/4		F-C	ACCEPTED	
RECIRC MANIFOLD		89-243,PT		B-F	NRI	
'A' (cont)		89-244,UT-RL		B-F	ROOT	
(0020)		0)-244,01-KL		<b>D</b> -F	GEOM.	
	RRF-F002A	89-246,PT		~ =		
	RRF-FUUZA			B-F	NRI	
		89-247,UI-45		B-F	NRI	
RECIRC PUMP SUCTION 'B'	1P201B-CASE INT	89-251,VT-3	1.2-21A	B-L-2	ACCEPTED	
JET PUMP	JPA-F002	89-272,PT	1.2-25	B-F	NRI	
INST 'A'		89-269,UT-45	1.2-43	B-F	NRI	
INOL A		89-270,UT-45		B-F		
	JPA-J003				NRI	
	JPA-3003	89-273,PT		B-F	NRI	
		89-271,UT-45		B-F	NRI	
RECIRC PUMP 'A'	HPA-CS-STUDS	89-278,UT-0	1.3-01	B-G-1	NRI	STUDS 1-16
	HPA-FLG-SURFACE	89-279,VT-1	1	B-G-1	ACCEPTED	
•	RPA-CS-NUTS	89-282,VT-1		B-G-1	ACCEPTED	NUTS 1-16
	RPA-SF-SCREWS	89-283,VT-1		B-G-2		SCREWS 1-16
RECIRC PUMP 'B'	DDD_CC_CMIDC	00 333 0				
RECIRC FUMP B		89-277,UT-0	•	B-G-1	NRI	STUDS 1-16
	RPB-FLG-SURFACE			B-G-1	ACCEPTED	
	RPB-CS-NUTS	89-281,VT-1		B-G-1	ACCEPTED	NUTS 1-16
	RPA-SF-SCREWS	89-284,VT-1		B-G-2	ACCEPTED	SCREWS 1-16
RECIRC PUMP 'A'	RPA-K001	89-285,PT	1.3-02	B-K-1	NRI	
		89-286, VT3/4		F-C	ACCEPTED	
	RPA-K004A	89-287,VT3/4		F-C	ACCEPTED	
RECIRC PUMP 'B'	DDB-MUUVA	00 200 1773/4	1 2 02			
WOING FORE B		89-289,VT3/4	1.3-03	F-C	ACCEPTED	
	RPB-K005	89-450,PT		B-K-1	NRI	
		89-290, VT3/4		F-C	ACCEPTED	

#### INSERVICE INSPECTION REPORT Part D page 9 of 1 December 28, 1988 through September 10,1990

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Corn Belt Power Cooperative Marion, Iowa Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commerial Service Date 2-1-75
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

### Component and Weld Examinations Identification Records

COMPONENT	DESCRIPTION	ISI REPORT	ISI ISO NUM.	CATEGORY	RESULTS	COMMENTS
CLASS 1 PRESSURE TESTS	RPV PIPING, PUMPS, VALVES & CRD DRIVES	89-13,VT-2	VARIOUS	B-P	SAT	PROCEDUR STP 46G02Z
CLASS 2 RHR PUMP SUCTION 'SE'	RHA-CE073A RHA-CF072 RHA-CF069 RHA-CF006	89-291,VT3/4 89-292,MT 89-293,MT 89-295,MT	2.2-32	F-C C-F C-F	ACCEPTED ACCEPTED ACCEPTED ACCEPTED	
RHR PUMP SUCTION 'NW'	RHB-CE076 RHB-CE068 RHB-CE065 RHB-CE037	89-298, VT3/4 89-299, MT 89-300, VT3/4 89-301, VT3/4 89-303, VT3/4	2.2-33	F-C C-C F-C F-A F-C	ACCEPTED NRI ACCEPTED ACCEPTED ACCEPTED	
RHR PUMP SHUTDOWN	REC-CE060 REC-CF056 REC-CE076 REC-CF080 REC-CE029 REC-CE024	89-304,MT 89-305,VT3/4 89-306,MT 89-307,VT3/4 89-308,MT 89-310,VT3/4 89-311,VT3/4	2.2-34	C-C F-C C-F F-C C-F F-A F-C	NRI ACCEPTED NRI ACCEPTED NRI ACCEPTED ACCEPTED	
RHR HT EXCH DISCHARGE 'SE'	REF-CF012  REF-CF004  RHF-CE040  RHF-CE045  REF-CF047  REF-CE051  REF-CE069  REF-CE131  REF-CE132	89-313,MT 89-314,MT 89-315,VT3/4 89-316,VT3/4 89-317,MT 89-318,VT3/4 89-320,VT3/4 89-321,VT3/4 89-323,MT 89-324,MT	2.2-37E 2.2-37A	C-F F-C F-C C-F F-A F-C C-F C-F	NRI ACCEPTED ACCEPTED NRI ACCEPTED ACCEPTED ACCEPTED NRI ACCEPTED	
RHR FUEL POOL COOLING	RHM-CE044 RHM-CE032 RHM-CE025 RHM-CF020 RHM-CF019 RHM-CE015	89-325, VT3/4 89-329, VT3/4 89-330, VT3/4 89-331, VT3/4 89-333, MT 89-334, MT 89-335, VT3/4	2.2-43	F-C F-C F-C C-F C-F F-C	ACCEPTED ACCEPTED ACCEPTED NRI NRI ACCEPTED	

## INSERVICE INSPECTION REPORT Part D page 10 of 12 December 28, 1988 through September 10,1990

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Corn Belt Power Cooperative Marion, Iowa Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

COMPONENT	DESCRIPTION	ISI REPORT	ISI ISO	CATEGORY	RESULTS	COMMENTS
			NUM.			
RHR (cont)	RHM-CEO11	90-328, <b>M</b> T		C-C	NRI	
······ (00110)	REM-CEO41	90-304,VI3/4		F-A	ACCEPTED	
HPCI-TURBINE	HPC-CE090	89-338,VT3/4	2.2-46	F-C	ACCEPTED	
STEAM INLET	HPC-CE089	89-339,VT3/4		F-B	ACCEPTED	
	HPC-CE082	89-340, VT3/4		F-C	ACCEPTED	
	HPC-CE078	89-341,VT3/4		F-B	ACCEPTED	
	HPC-CE075	89-342,VT3/4		F-C	ACCEPTED	
	HPC-CE072	89-343,VT3/4		F-C	ACCEPTED	
	HPC-CE070	89-344,VT3/4		F-C	ACCEPTED	
	HPC-CE067	89-345,VT3/4		F-C	ACCEPTED	
	HPC-CE064	89-346,VT3/4		F-C	ACCEPTED	
	HPC-CE062	89-347,MT		C <b>-C</b>	NRI	
	WDG 60045	89-348,VT3/4		F-A	ACCEPTED	
	HPC-CE047	89-349,VT3/4		F-C	ACCEPTED	
	HPC-CF046	89-350,MT		C-F	NRI	
	WDG_GB044	89-351,UT-45		C-F	NRI	
	HPC-CF044	89-352,MT		C- <b>F</b>	NRI	
	HPC-CE042	89-353,UT-45		C-F	NRI	
	APC-CEU42	89-354,VT3/4		F-C	ACCEPTED	
HPCI TURBINE	HPD-CE014	89-355,VT3/4	2.2-47	F-B	ACCEPTED	
STEAM EXHAUST	HPD-CE016	89-356, <b>MT</b>		C-C	NRI	
		89-357,VT3/4		F-C	ACCEPTED	
	HPD-CE022	89-358,VT3/4		F-C	ACCEPTED	
	HPD-CE023	89-359,VT3/4		F-C	ACCEPTED	
	HPD-CE030	<b>89-360,MT</b>		C <b>-C</b>	NRI	
		89-361,VT3/4		F-B	ACCEPTED	
	HPD-CE034	89-362,VT3/4		F-A	ACCEPTED	
	HPD-CF043	89-363,MT		C-F	NRI	
	HPD-CE047A	89-364,VT3/4		F-C	ACCEPTED	
CORE SPRAY	CSA-CEO41	89-365,VT3/4	2,2-48	F-A	ACCEPTED	
UCTION 'SE'	CSA-CF040	89-366,MT		C-F	NRI	
•	CSA-CE038A	89-367,VT3/4		F-C	ACCEPTED	
	CSA-CE030	89-368, VT3/4		F-A	ACCEPTED	
CORE SPRAY DISCHARGE 'SE'	CSC-CE005	89-369, VT3/4	2.2-50	F-C	ACCEPTED	

## Part D page 11 of 1

## INSERVICE INSPECTION REPORT December 28, 1988 through September 10,1990

1) Owners: Iowa Electric Light and Power Company P.O. Box 351
Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Marion, Iowa

Corn Belt Power Cooperative

Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1

TEST

- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

COMPONENT	DESCRIPTION	ISI REPORT	ISİ	CATEGORY	PESIT.TS	COMMENTS
COMPONENT	DDSCRIP II ON	151 RDF OKT	ISO NUM.	CHILDONI		
•						
MAIN STEAM 'A'	MSA-CE023	89-370,VT3/4	2.2-53	F-A	ACCEPTED	
MILIN DIDILL IL	MSA-CE029A	89-371,VT3/4		F-C	ACCEPTED	
	MSA-CE029B	89-372,VT3/4		F-C	ACCEPTED	
MAIN STEAM 'B'	MSB-CF002	89-373,MT	2,2-54	C-F	NRI	
	MSB-CE013	89-374, VT3/4		F-C	ACCEPTED	
	MSB-CE021	89-375, VT3/4		F-C	ACCEPTED	
	MSB-CE024	89-376, VT3/4		F-C	ACCEPTED	
	MSB-CE030	89-377,VT3/4		F-C	ACCEPTED	,
MAIN STEAM	MSE-CE028	89-378,VT3/4	2.2-57	F-C	ACCEPTED	
BYPASS	MSE-CE032	89-379,VT3/4	•	F-B	ACCEPTED	
•	MSE-CE004	89-380, VT3/4		F-C	ACCEPTED	
	MSE-CF009	89-381,MT		C-F	ACCEPTED	
		89-382,UT-45		C-F	NRI	
	MSE-CF013	89-383, <b>MT</b>		C-F	NRI	
		89-384,UT-45		C-F	NRI	
	MSF-CE006	89-385,VT3/4	2.2-58	F-C	ACCEPTED	
	MSF-CE007	89-386, VT3/4		F-C	ACCEPTED	
	MSF-CE008	89-387,MT		C-F	NRI	
		89-388,UT-45		C-F	NRI	
	MSF-CE009	90-163,MT		C-C	ACCEPTED	
-	MSF-CF011	89-389,MT		C-F	NRI	
		89-390,UT-45		C-F	NRI	
SCRAM DISCHARGE	SDS-CF002	89-391,MT	2,2-60	C-F	NRI	
HDR "SOUTH"		89-392,UT-45		C-F	NRI	
	SDS-CE001B	89-393,VT3/4		F-A	ACCEPTED	
CLASS 2 PRESSURE TESTS						
CRD MINIPURGE 10 YEAR HYDRO TEST	CRD MINIPURGE	90-53,VT-2	VARIOUS	C-H	SAT	PROCEDURE STP 46G01
CRD HYD CONTROL UNIT LEAKAGE	CRA-HCU-ALL 89	89-436,VT-2	VARIOUS	C-H	SAT	PROCEDURE STP BS-47

## INSERVICE INSPECTION REPORT

Part D page 12 of 12

December 28, 1988 through September 10,1990

1) Owners: Iowa Electric Light and Power Company P.O. Box 351

Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative

Corn Belt Power Cooperative

Marion, Iowa Humboldt, Iowa

2) Plant Duane Arnold Energy Center, Palo, Iowa 52324

3) Plant Unit #1

4) Owners Certificate of Authorization (if required) N/A

5) Commercial Service Date 2-1-75

6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

### Component and Weld Examinations Identification Records

COMPONENT	DESCRIPTION	ISI REPORT	ISI ISO NUM.	CATEGORY	RESULTS	COMMENTS
PCI 10 YEAR HYDRO TEST	HPCI STEAM SIDE	90-54,VI-2	VARIOUS	C-H	SAT	PROCEDURE STP 46G010
HPCI FUNCTION TEST	HPCI STEAM AND PUMP SIDE	89-437,VT-2	VARIOUS	C-H	SAT	PROCEDURE STP 45D001
PRESSURE TEST OF INSTRUMENT	RPV	89-13,VT-2	VARIOUS	C-H .	SAT	PROCEDURE
LINES	MAIN STEAM	89-13,VT-2	VARIOUS	C-H	SAT	STP 46G022 PROCEDURE
•	RECIRC	89-13,VT-2	VARIOUS	C-H	SAT	PROCEDURE
	RCIC	89-13,VT-2	VARIOUS	C-H	SAT	STP 46G022 PROCEDURE
	HPCI	89-13,VT-2	VARIOUS	C-H	SAT	STP 46G022 PROCEDURE
	CORE SPRAY	89-13,VT-2	VARIOUS	C-H	SAT	STP 46G022 PROCEDURE

#### Abbreviations

RPV - Reactor Pressure Vessel

NRI - Non-Recordable Indication "Acceptable"

RFO - Refueling Outage ID - Inner Diameter

GEO. - Geometry

00 - Outer Diameter

SAT - Satisfactory



## ABSTRACT OF ASME SECTION XI ADDITIONAL AND SUCCESSIVE EXAMINATIONS

The following is a list of the additional examinations due to ASME Section XI corrective measures. Also included are successive examinations required due to corrective measures during previous outages.

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Corn Belt Power Cooperative Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

## Additional Examinations

Corrective Measured Component	Class	Additional Inspected Component	Report #	ISI ISO.
Component	CIGSS	Component	Keport #	101 150.
Hanger EBB-14-H-5 (89-345)	2	EBB-14-H-8	90-012	2.2-46
Hanger EBB-14-H-11 (89-354)	2	EBB-14-H-9	90-013	2.2-46
( )		EBB-14-H-12	90-014	2.2-46
		EBB-14-H-13	90-015	2.2-46
		HLE-6-H-7A	90-017	2.2-47
Hanger EBB-14-H-8 (90-12)	2	All similar	N/A	2.2-46
Hanger EBB-14-H-12(90-14)	2	hangers examined		
Hanger GBB-5-H-20 (89-325)	2	GBB-5-H19	90-207	2.2-37A
,		GBB-3-H-20C	90-208	2.2-40
		DBB-2-H-20B	90-209	2.2-40
		GLE-5-H-24	90-210	2.2-50
		GBB-5-H-18	90-211	2.2-37A
		300 J II 10	<i></i>	2.2 3/11

## ABSTRACT OF ASME SECTION XI ADDITIONAL AND SUCCESSIVE EXAMINATIONS

The following is a list of the additional examinations due to ASME Section XI corrective measures. Also included are successive examinations required due to corrective measures during previous outages.

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

- 2) Plant <u>Duane Arnold Energy Center, Palo, Iowa 52324</u>
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

ective Measured Component	<u>Class</u>	Additional Inspected Component	Report #	ISI ISO.
Hanger HBB-25-H-166 (89-336)	2	HBB-25-H-163 HBB-25-H-164 HBB-25-H-165 HBB-25-H-168 HBB-25-H-172	90-212 90-213 90-214 90-215 90-216	2.2-43 2.2-43 2.2-43 2.2-43 2.2-43
Lug Weld RHF-CE123 (89-324)	2	RHF-CE107 RHC-CE054 RHE-CE069 HPC-CE030 HPC-CE077 CSB-CE013 RHJ-CE008 RHI-CE073	90-262 90-263 90-264 90-265 90-266 90-267 90-268 90-269	2.2-37A 2.2-34 2.2-36 2.2-46 2.2-46 2.2-49 2.2-40 2.2-39
Weld Surface MSC-J009 (89-078	) 1	MSB-J010 MSB-J011 MSC-J015 MSC-J016	90-273 90-274 90-275 90-276	1.2-2 1.2-2 1.2-3 1.2-3
Hanger EBD-2-SR-111 (89-370)	2	EBD-2-SR-109 EBD-2-H-10 EBD-2-SA-135	90-277 90-278 90-279	2.2-53 2.2-53 2.2-53

## ABSTRACT OF ASME SECTION XI ADDITIONAL AND SUCCESSIVE EXAMINATIONS

The following is a list of the additional examinations due to ASME Section XI corrective measures. Also included are successive examinations required due to corrective measures during previous outages.

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

- 2) Plant <u>Duane Arnold Energy Center</u>, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
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- 6) National Board Number of Unit N/A

Corrective Measured Component	<u>Class</u>	Additional Inspected Component	Report #	ISI ISO.
Snubber EBD-2-SS-115 (89-371)	2	EBD-2-H-9 EBD-2-H-19 EBD-2-SS-117 EBD-2-SS-118	90-286 90-287 90-288 90-289	2.2-53 2.2-53 2.2-54 2.2-54
Snubber EBD-2-SS-116 (89-372)	2	All snubbers of this type examined in this area	N/A	2.2-53
Weld MSE-CF009 (89-381)	2	MSE-CF010 MSE-CF006 MSE-CF014 MSE-CF020	90-280 90-281 90-282 90-283	2.2-57 2.2-57 2.2-57 2.2-57
Hanger GBB-5-H-19 (90-707)	2	GBB-5-SA-230	90-303	2.2-37
Weld MSE-CF010 (90-280)	2	MSE-CF022	90-306	2.2-57
Weld MSE-CF006 (90-281)	2	MSE-CF023 MSE-CF024 MSE-CF026 MSE-CF027	90-307 90-308 90-309 90-310	2.2-57 2.2-57 2.2-57 2.2-57

## ABSTRACT OF ASME SECTION XI ADDITIONAL AND SUCCESSIVE EXAMINATIONS

The following is a list of the additional examinations due to ASME Section XI corrective measures. Also included are successive examinations required due to corrective measures during previous outages.

1) Owners: Iowa Electric Light and Power Company

P.O. Box 351

Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Marion, Iowa

Corn Belt Power Cooperative

Humboldt, Iowa

2) Plant Duane Arnold Energy Center, Palo, Iowa 52324

3) Plant Unit #1

4) Owners Certificate of Authorization (if required) N/A

5) Commercial Service Date 2-1-75

6) National Board Number of Unit N/A

ective Me			Additional Inspected		
Componen	<u>t</u>	<u>Class</u>	Component	Report #	ISI ISO.
			MSE-CF029	90-311	2.2-57
		•		· ·	
			MSE-CF030	90-312	2.2-57
			MSE-CF034	90-313	2.2-57
			MSE-CF035	90-314	2.2-57
			MSE-CF038	90-315	2.2 <b>-</b> 57
			MSE-CF039	90-316	2.2-57
			MSF-CF002	90 <del>-</del> 317	2.2-57
	•		MSF-CF012	90-318	2.2-57
			MSF-CF013	90-319	2.2-57
			MSF-CF022	90-320	2.2-57
			MSF-CF023	90-321	2.2-57
			MSE-CF024	90-322	2.2-57
CRD Drive		1	Remaining	89-13	1.1-8A
Bolting 10-19	(90-32)		bolts in	,55 _5	
<b>,</b>	(2 /		tension		
10-35	(90-33)		During		
10 33	(30 33)		-		
02 10	(00.36)		leakage test		
	(90-36)				
	(90-37)				
14-15	(90-39)				
_					



## ABSTRACT OF ASME SECTION XI ADDITIONAL AND SUCCESSIVE EXAMINATIONS

The following is a list of the additional examinations due to ASME Section XI corrective measures. Also included are successive examinations required due to corrective measures during previous outages.

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Corn Belt Power Cooperative Humboldt, Iowa

- 2) Plant <u>Duane Arnold Energy Center</u>, Palo, Iowa 52324
- 3) Plant Unit #1
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- 6) National Board Number of Unit N/A

		Additional		
Corrective Measured		Inspected		
Component	<u>Class</u>	Component	Report #	ISI ISO.

30-23 (90-41)

42-23 (90-43)

02-23 (90-44)

10-11 (90-45)

10-27 (90-46)

## ABSTRACT OF ASME SECTION XI ADDITIONAL AND SUCCESSIVE EXAMINATIONS

The following is a list of the additional examinations due to ASME Section XI corrective measures. Also included are successive examinations required due to corrective measures during previous outages.

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Central Iowa Power Cooperative Corn Belt Power Cooperative Humboldt, Iowa

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- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

### Successive Exams

	ts
Component Class Component Report # ISI ISO. Resul	
RPA-K002 1 87-559 89-288 1.3-2 Accep	ted
RHA-CE056 2 87-713 89-294 2.2-32 Accep	ted
RHA-CE050 2 87-714 89-296 2.2-32 Accep	ted
RHA-CE042 2 87-598 89-297 2.2-32 Accep	ted
RHB-CE057 2 87-658 89-302 2.2-33 Accep	ted
RHC-CE038A/B 2 87-342 89-309 2.2-34 Accep	ted
RHC-CE022A/B 2 87-668 89-312 2.2-34 Accep	ted
RHF-CE056 2 89-042 89-319 2.2-37A Accep	ted
RHF-CE092A 2 87-560 89-322 2.2-37A Accep	ted
RHM-CE021 2 87-601 89-332 2.2-43 Accep	ted
RHM-CE010 2 87-562 89-337 2.2-43 Accep	ted



## ABSTRACT OF ASME SECTION XI REPAIRS AND REPLACEMENTS

The following is a list of Repairs and Replacements completed with a brief description of work performed.

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

NIS-2 No.	Class	<u>Components</u>	<u>Description</u>
10-89-01 10-89-02	1 1	PSV4402, pilot valve S/N 141 CV4416	Replaced pilot valve Replaced stem/stem disassembly
10-89-03 10-89-04	2 1	LS2206 (level switch) CV4416	Repaired plug Replaced stem/stem disassembly, disk, bonnet nut
10-89-05	1	PSV4402, pilot valve S/N 200	Replaced pilot valve, stud, nuts
10-90-01	2	Hydraulic snubber, GBB-003-SS-225	Replaced snubber
10-90-02	2	Hydraulic snubber, GLE-008-SS-240	Replaced snubber
10-90-03	2		Replaced snubber
10-90-04	1	MSRV pilot valve S/N 141 to be placed on PSV4405. See NIS2 10-90-43	Replaced pilot disc and pre load spacer
10-90-05	1	MSRV pilot valve S/N 218 to be placed on PSV4402. See NIS2 10-90-44	Repaired valve body and pilot disc
10-90-06	1	MSRV pilot valve S/N 203 to be placed on PSV4406	Welded bellows and pilot valve body
10-90-07	1	Hydraulic snubber, DCA-14-SS-73	Replaced studs/nuts
10-90-08	2	Valve, V-19-27	Replaced valve

## ABSTRACT OF ASME SECTION XI REPAIRS AND REPLACEMENTS

The following is a list of Repairs and Replacements completed with a brief description of work performed.

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
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- 6) National Board Number of Unit N/A

NIS-2 No.	<u>Class</u>	<u>Components</u>	Description
0-09	2	Hanger lug, RHF-CE-123	Repaired hanger lug (surface)
10-90-10	1	Weld, MSC-J009	Repaired weld (surface)
10-90-11	1	Mechanical snubber, EBA-X7D-SS-001	Replaced snubber for functional test
10-90-12	1	Mechanical snubber, DLA-003-SS-003	Replaced snubber for functional test
10-90-13	2	Weld, MSE-CF009	Repaired weld (surface)
10-90-14	2	Weld, MSE-CF006	Repaired weld (surface)
10-90-15	2	Weld, MSE-CF010	Repaired weld (surface)
10-90-16	2	Valve, MO-1934	Repaired valve body, welding disc
10-90-17	1	Snubber pin for DCA-004-SSB-001	Replaced snubber pin for proper fit
10-90-18	1	Mechanical snubber, DCA-004-SSB-004	Replaced snubber for functional test
10-90-19	2	Line 10"-EBB-16 (RHR side)	Modified line
10-90-20	2	Line 10"-EBB-16 (HPCI side)	Modified line
10-90-21	1	Snubber pin for DCA-004-SSA-001	Replaced snubber pin for proper fit
10-90-22	1	Valve, MO1905	Repaired valve internals
10-90-23	1	Mechanical snubber, DBA-004-SS-036	Replaced snubber for functional test
10-90-24	2	Valve, M01989	Repaired guide rib and replaced 3 studs



## ABSTRACT OF ASME SECTION XI REPAIRS AND REPLACEMENTS

The following is a list of Repairs and Replacements completed with a brief description of work performed.

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

- 2) Plant <u>Duane Arnold Energy Center</u>, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
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- 6) National Board Number of Unit N/A

NIS-2 No.	<u>Class</u>	Components	<u>Description</u>
10-90-25	2	HPCI Line 1" EBB-14	Modified line, sockolet with 1-1/2" diameter pieces
10-90-26	1	Mechanical snubber, DBA-004-SS-001	Replaced snubber for functional testing
10-90-27	1	Mechanical snubber, DBA-009-SS-002B	Replaced snubber for functional testing
10-90-28	2	Hanger, HBB-25-H163	Replaced base plate
10-90-29	2 2	Valve, V03-0005	Replaced valve bonnet and valve disk
10-90-30	2	Valve, V03-0004	Replaced valve bonnet and valve disk
10-90-31	2 <sup>.</sup> 1	Valve, V19-46	Replaced valve
10-90-32	1	RWCU line 4"-DCA-6 and 4"-DCA-14	Modified line and two supports
10-90-34	1	Valve, MO-2312	Replaced bonnet
10-90-35	1	CRD drives, see CRD Table OP cycle 10/11	Replaced CRD drives, some bolting
10-90-36	1	Socket weld, 4F3 on Recirc Riser 'F'	Weld repair of socket weld
10-90-37	1	N7 vent flange	Machined flange for better fit
10-90-38	1	Head Vent line flange, (lower, 2" DBA-9)	Replaced studs and nuts
10-90-39	1	Valve, V14-06	Replaced valve
10-90-40	1	Valve, V14-05	Replaced valve

## ABSTRACT OF ASME SECTION XI REPAIRS AND REPLACEMENTS

The following is a list of Repairs and Replacements completed with a brief description of work performed.

1) Owners: Iowa Electric Light and Power Company P.O. Box 351

Cedar Rapids, Iowa 52406

- 2) Plant <u>Duane Arnold Energy Center</u>, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date <u>2-1-75</u>
- 6) National Board Number of Unit N/A

-2 No.	<u>Class</u>	Components	Description
10-90-41	2	Line to relief valve PSV2223	Replaced threaded pipe with flanges
10-90-42	1	Relief valve, PSV4407	Replaced pilot valve, main body
10-90-43	1	Relief valve, PSV4405	Replaced pilot valve
10-90-44	1 1	Relief valve, PSV4402	Replaced pilot valve
10-90-45	1	Valve, MO-2239	Repaired valve internals
10-90-46	1	Valve, MO-4630	Replaced disc, studs, nuts
10-90-47	1	Valve, MO-4629	Repaired valve internals
10-90-48	1	CRD housing, 1R215 (22-19)	Replaced bolts
10-90-49	1	Relief valve, PSV4406	Replaced bolts and nuts
10-90-54	1	Recirc Pump A	Modified internals
10-90-55	1	Recirc Pump B	Modified internals
10-90-56	1 1	Relief valve, PSV4401	Replaced pilot
10-90-57	1	Relief valve, PSV4403	Replaced studs and nut
10-90-58	1	Valve, CV4412	Modified valve internals
10-90-59	1	Valve, CV4413	Modified valve internals
10-90-60	1	Valve, CV4415	Modified valve internals
0-61	1	Valve, CV4416	Modified valve internals

Part F, Page 5

## ABSTRACT OF ASME SECTION XI REPAIRS AND REPLACEMENTS

The following is a list of Repairs and Replacements completed with a brief description of work performed.

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

NIS-2 No.	<u>Class</u>	<u>Components</u>	<u>Description</u>
10-90-62	1	Valve, CV4418	Modified valve internals
10-90-63	1	Valve, CV4419	Modified valve internals
10-90-64	. 1	Valve, CV4420	Modified valve internals
10-90-65	1	Valve, CV4421	Modified valve internals

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative

Corn Belt Power Cooperative

Marion, Iowa Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commerial Service Date 2-1-75
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

FORM NIS2'S

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

=									
1.	Owner Iowa	Electric Ligh	it and Powe	er	DateFebru	ary 7,	1989		
		Name							
	P.O. Box 3	351, Cedar Ra Address	pids, IA 5	2406	Sheet 1	of1			
2.	Plant Duane	Arnold Energy Nama	Center	<del></del>	Unit1			<del></del> -	
	3277 DAEC 1	CMAR 93369							
		Rd., Palo, IA Address		<del></del>		Rapelr Organization P.O. No., Job No., etc.			
3.	Work Performed by	Type Code Symbol		None	<del></del>				
	3277 DAFC	Dd Dolo T	Nama		Authorization No. None				
	J2// DAEC	Rd., Palo, I	A 32324		Expiration Date		None		
4.	Identification of Sy	stem <u>Main Ste</u> AS	am 'B' (C1	ass 1)					
					1.16.0		NT / A		
5.	(a) Applicable Con	struction Code II	19	Edition,_		\ddenda,	N/A	_Code Case	
	(b) Applicable Edit	ion of Section XI Uti	lized for Repairs	or Replacements	19 <u>00 WOI</u>				
6.	Identification of Co	emponents Repaired o	or Replaced and F	Replacement Con	nponents				
				National			Repaired,	ASME Code Stamped	
	Name of Component	Name of Manufacturer	Manufacturer Serial No.	Board No.	Other Identification	Year X <b>BKAR</b> Tested	Replaced, or Replacement	(Yes or No)	
Га	rget Rock					<del> </del>			
	lot Valve	Target Rock	S/N 141	N/A	PSV 4402	1988	Replaced	Yes	
						-	•		
	<del></del>								
	<del></del>	<u> </u>			<u> </u>	L			
7.	Description of Work	Replaced pi	lot valve	S/N 189 wi	th pilot val	Lve S/N	141		
3.	Tests Conducted:	Hydrostatic Pnother Pressure_		ominal Operating Test Temp	Pressure X 550_°F				
		tal sheets in form of ough 6 on this report of this form,							

Replaced pilot valve S/N 189 with pilot valve 141. (P.U. S46339)  Applicable Manufacturer's Data Reports to be attached  VT-3 inservice inspection of valve internals (partial only) performed  and acceptable. Reference inspection report no. 89-03. VT-2 of the  Dressure retaining components were performed under inspection report no.89-  CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement conforms to the rules of the repair or replacement  SME Code, Section XI.  Pure Code Symbol Stamp None  Expiration Date None
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement conforms to the rules of the repair or replacement.  None  None
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement conforms to the rules of the repair or replacement  SME Code, Section XI.  None  None
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement conforms to the rules of the repair or replacement  SME Code, Section XI.  None  None
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement conforms to the rules of the repeir or repair or replacement  SME Code, Section XI.  ype Code Symbol Stamp None
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We certify that the statements made in the report are correct and this <u>replacement</u> conforms to the rules of the SME Code, Section XI.  The statement of the repair or replacement or repair or repair or repair or replacement or repair or replacement or repair or replacement or repair or replacement or repair or repair or repair or repair or replacement or repair or repair or repair or replacement or repair o
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O(A/A)
anad . ASME Administrator Date February /O 19 89
ॐ¥May ∕a≮Owner's Designes, Title
CERTIFICATE OF INSERVICE INSPECTION
the undersigned, holding a valid commission issuad by the National Board of Boiler and Pressure Vessel Inspectors and the Star Province of Iowa and employed by Lumbermens Mutual Casualty Company
Long Grove, Illinois have inspected the components describe
this Owner's Report during the period 1-18-89 to 10-4-89 , and state the
this Owner's Report during the period
wner's Report in accordance with the requirements of the ASME Code, Section XI, Except IWA-7210.
By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning to
caminations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his employ
tall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with the
spection.
^ <b>*</b>
Commissions Nat'1 Bd. 5813 (I)(N) IA-1041  National Board, State, Province, and Endorsements
National Board, State, Province, and Endorsaments
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V.V

. Owner <u>IOWa</u> E	lectric Ligh	t and Powe	<u>^</u>	Date	April	3, 1989		
P.O. Box 3	351, Cedar R	apids, IA	52406	Sheet 1	of1		<del></del>	
. Plant <u>Duane</u> A	rnold Energ	y Center	<del>_</del>	Unit1		·		
	Rd. Palo. I		<del></del>	CMAR 9369 Rapair Orga		<sup>1</sup> Д <sup>1</sup> .O. No., Job No.,	etc.	
Work Performed by				Type Code Symbol Stamp None  Authorization No. None				
32// DAEC	Rd., Palo,	IA 52324	<del></del>	Expiration Date		None	<del> </del>	
(a) Applicable Cons (b) Applicable Editi  * except as Identification of Con	truction Code	ilized for Repairs	or Replacement	19 <u>80 W81</u>	Addenda,		_Code Case	
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)	
Valve Bonnet	Rockwell	N/A	None	CV 4416	1989	Repaired	No	
tem/stem dis ssembly	c Rockwell	*	None	CV 4416	1989	Replaced*	No	
Description of Work	valve bonne	t for <u>p</u> rop	sc assembler fit.	_	ol valv	e CV4416.	Machi	

(12/82)

This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017

recorded at the top of this form.

<sup>\* 6062065-31</sup> 

<sup>\*\*</sup> Stem/stem disc assembly was formerly in CV 4412

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1. Owner Iowa E	Name			Dete October	25,	1909	
P.O. Box 35	1, Cedar Rap	ids, IA 5	2406	Sheet 1	of 1		`
2. PlantDuane		y Center		Unit1			
~3277 DAEC R	Nama Id. Palo, IA	52324		CMAR	97337		
	Address	tnic		Repair Org	enization	P.O. No., Job No.,	etc.
3. Work Performed by	TOWA ETEC	Name		Type Code Symbo		None None	
3277 DAEC R	d. Palo, IA			Authorization No.		None	<del></del>
	Address			Expiration Date			
4. Identification of Sy	stem HPCI Su	oply Line	D.P. Level	Switch (LS2	2206)		
<ul><li>5. (a) Applicable Con</li><li>(b) Applicable Edit</li><li>6. Identification of Co</li></ul>	ion of Section XI Uti	lized for Repairs	or Replacements	19 <u>80 W8</u> 1	∖ddenda,_	N/A	_Code Cas
G. raentineation of Co	imponents Napaired C	n neplaced and r	replacement Con	nponents			
Name of	Name of	Manufacturer	National Board	Other	Yeer	Repaired, Replaced,	ASME Code Stamped (Yes
Component	Manufacturer -	Serial No.	No.	Identification	Built	or Replacement	or No)
LS2206	Robert Shaw Controls Co	N/A	N/A	Model No. 82938-GI	<b>197</b> 0	Repaired	No
·							
7. Description of Work	Seal weld o	f 3/4" NPT	Plug				
3. Tests Conducted:	Hydrostetic Pne	eumatic No N/A psi	minal Operating Test Temp.	Pressure  N/A • F			
	al sheets in form of ugh 6 on this report						

(12/82)

9. Remarks $A = \frac{3}{4}$ NPT plug had a steam leak that was seal welded under CMAR 97337.
Applicable Manufacturer's Data Reports to be attached
The seal weld was liquid penetrant inspected and found acceptable.
The production of the round deceptable.
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
Typa Code Symbol StampN/A
Certificate of Authorization No. N/A Expiration Date N/A
l //
Signed Result ,ASME Administrator Date 10-30 19 89
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 10Wa and employed by Lumbermens Mutual Casualty Company of
Long Grove, Illinois have inspected the components described
in this Owner's Report during the period 10-23-89 to 12-4-89, 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.
inspection.
19 FK4 2 2 2 4 104 104 104 104 104 104 104 104 104 1
Commissions Nat' 1 Bd. 5813 (I)(N) IA-1041     Inspector's Signature   Netlanel Board, State, Province, and Endorsements
The country of the co
a dha H OO
Date

(12/82)



1. Owner <u>Iowa Electric Light and Power</u> Name P.O. Box 351, Cedar Rapids, IA 52406	Date November 2, 1989  Sheet 1 of 21 integral
2. Plant Duane Arnold Energy Center	Unit One
Neme 3277 DAEC Rd, Palo, IA 52324 Address	Note 2 Note 3  PMAR 1038426. CMAR 92975  Repeir Organization P.O. No., Job No., etc.
3. Work Performed by Towa Electric	Type Code Symbol Stamp None Authorization No. None
3277 DAEC R Pa <sup>-</sup> o, IA 52324  Address  Main Steam IRI Class 1	Expiration Date None
4. Identification of System Main Steam 'B' Class 1 Not	
5. (a) Applicable Construction Code B31.1 19 67 Edition (b) Applicable Edition of Section XI Utilized for Repairs or Replacem Note 1 - except as noted in GE Spec 21A9	ents 19 <u>80 W8</u> 1
6. Identification of Components Repaired or Replaced and Replacement	Components

Name of Component	Name of Manufacturer	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
Stem/Stem Disk Assembly	Rockwell	*	None	CV4416	1985	Replaced	No
Disk	Rockwell	**	None	CV4416	1985	Replaced	No
Bonnet Nut	Rockwell	IN85326	None	CV4416	1988	Replaced	No
Disk	Rockwell	**	None	Spare	1989	Repaired	No
Main Valve Body	Rockwell	N/A	None	Guide Rib	1989	Repaired	No

7. Description of Work Replaced disc and stem/stem disk assembly for control valve CV4416

8.	Tests Conducted:	Hydrostatic 🗌	Pneumatic	Nominal	Operating	Pressure	
		Other Pressu	ra 1025	psi Tes	t Temp	185	°F

NOTE: Supplemental sheets in form of lists, sketchas, or drawings may be used, provided (1) size is 8½ 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)

Note 2

Note 2

Note 2

Note 3

Note 2

This Form (E00030) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017

- \* 6062065-29 Note 4 disk had removed all stellite on seating area by grinding, rewelded and machined to proper dimensions. Stem was redressed and
- \*\* 6062065-61 acceptable for reuse by Quality Control. Guide Rib was smoothed for proper fit of valve internals.

Not

NO

9.	Ramarks Replacing stem/stem disc assembly and disk with certified stem/stem disc
	Applicable Manufacturer's Deta Reports to be attached assembly and disk (P.O. E9-15757-N-DA) (see Note 5). VT-3 inservice inspection
	assembly and disk (P.O. E9-13/3/-N-DA) (see Note 5). VI-3. Hiservice hispection
	of valve internals performed and accepted (Report No. 89-451). All welded
	components after grinding, rewelded and machined to proper fit were PT and acceptable VT-2 of the pressure retains components were performed and acceptable under inspection report no. 89-017 Bonnet Nut was replaced with certified nut
	(P.O. 101859). Replaced nut was inspected and acceptable (see Report No. 89-452).
	CERTIFICATE OF COMPLIANCE Repair &
	We certify that the statements made in the report are correct and this Replacement conforms to the rules of the
	ASME Code, Section X1.
	Type Code Symbol Stamp None
	Type Code Symbol StampNOTE
	Certificate of Authorization No. None Expiration Date None
	Signed 2 Metro Owners Jesignee, ASME Admin. Frita Date December 8 19 89
_	
	CERTIFICATE OF INSERVICE INSPECTION
	I, the undersigned, holding a valid commission issued by the National Soard of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by Lumbermens Mutual Casualty Company of
	Long Grove, Illinois have inspected the components described
	in this Owner's Report during the period 9-20-89 to 1-12-90 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, except Note 6.
	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.
İ	Commissions Nat'   Bd. 5813 (I) (N) IA-1041
	Inspector's Signeture National Board, State, Province, and Endorsements
	Date January 12 19 90
(12	/82)

Note 5 - disk assembly was formly in CV4421 and stem/stem disc assembly was formly in CV4419, then both as spares.

Note 6 - except as described by NCR 89-20 and NCR 89-21, 1-12-0

	Name 351, Cedar Ra		2406	Sheet 1	of1	···-	····
Plant Duane	Arnold Energy	Center		Unit One	——————————————————————————————————————		
	Road, Palo, I			CMAR 942			
	Address y Iowa Electr		-T	Type Code Symbo	I Stamp N	P.O. No., Job No., ONE E	etc.
3277 DAEC	Road, Palo, I	A 52324		Authorization No.	None		
	ystem <u>Main Stea</u>						
(b) Applicable Edi	nstruction Code <u>Sect</u> ition of Section XI Uti omponents Repaired o	ilized for Repairs	or Replacemen	ts 19 <u>80 w81</u>			_Code Cas
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)
ilot Valve	Target-Rock	200	N/A	PSV 4402	1976	Replacemen	t Yes
ase pilot p bolti <b>n</b> g	Cardinal	Ht no. 211916	N/A	PSV 4402	1989	Replacemen	t No
ase pilot p nuts	Target-Rock	Ht no. 51480	N/A	PSV 4402	1977	Replacemen	t No
P HULS	T . D- I	Ht no. 578L7375	N/A	PSV 4402	1984	Replacemen	it No
ase pilot p nuts	larget-Rock						
ase pilot	larget-Rock				ļ		

recorded at the top of this form.

6 -

3

3

Remarks Replaced 6	base pilot operat	or bolts wi	th certifie	d bolts (P.	0. S <b>4938</b> 1)
Replaced 6 base	Applicable Mar pilot operator nu	nufacturer's Deta F Its With Cel	reports to be attach tified nuts	(P.O. 2536	4•21635) (
Replaced pilot	valve assembly (P.	0. 18747) V	T-1 of bolt	ing was per	formed und
# 39-465, Valve	rt #89.464, VT-3 o #200 was operabili ve was performed u	ty test was	satisfacto	ry (P.O. 54	
		TE OF COMPLIA			
We certify that th ASME Code, Section XI.	e statements mede in the repor	rt are correct and t	his Replaceme repair or replacer		e rules of the
			•	*	
Type Code Symbol Stamp	None				
Certificate of Authorization	No. None	Expi	ration Date Non	e-	
igned 2 Poly Owner's	. ASME Administ	rator	Date Decemb	er zo	. 19 89
Owner of Owner's	Designee) Title				
**************************************	CERTIFICATE	OF INSERVICE I	NSPECTION	<u> </u>	
the undersigned, holding a	valid commission issued by the	e National Board o	f Boiler and Pressu	re`Vessel Inspectors	and the State
r Province of <u>IOWa</u> Long Grove, Ill	and employed by	<u>, Lumbermans</u>	•		
	ing the period $11-28$	-89	have insper	cted the compone	ents described and state that
	e and belief, the Owner has po		tions and taken cor	•	
	e with the requirements of the				
	e neither the inspector nor his				
nations and corrective	r measures described in this C r for any personal injury or pro	)wner's Report. F poerty damage or a	urthermore, neithe	the inspector nor	his employer
spection.	,,		TOUS OF ALLY KING GI	and them of come	cted with this
Melinalar		M - A	13 D.J. #010	/ T	
Inspector	s Signeture	Commissions Nat	'1 Bd. 5813 etional Board, State	(I) (N) IA-	-1041
			220,0,000	,	Joing/113
ite January //	19_90		•		

1. Owner Iowa E	lectric Ligh	t and Powe	<u>r</u>	Date Februar	ry 7, 1	1990	
P.O. Box 35	1, Cedar Rap	ids, IA 5	2406	Sheet 1	of1		
2. Plant Duane	Address Arnold Energ	y Center		Unit 1			
	Neme Rd., Palo, IA			PMAR 10	140723		
	Address					.O. No., Job No.,	etc.
3. Work Performed by	. Iowa Elect	ric Name	·	Type Code Symbol	Stamp	None None	*
3277 <b>DA</b> EC R	Rd., Palo, IA			Authorization No.		None	
			7				
4. Identification of Sy	stem RHR PUMP	DISCHARGE	(N.W.) (C	LASS 2)			
<ol> <li>(a) Applicable Con</li> <li>(b) Applicable Edit</li> <li>Identification of Co</li> </ol>	ion of Section XI Uti	lized for Repairs	or Replacements	19 <u>80W81</u>	Addenda,_	N/A	Code Case
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)
Hydraulic	Bergen	D. Arnold		GBB-003		_	
Snubber	Patterson	#38	None	-SS-225	1988	Replacemen	t No
					-		
7. Description of Work	Hydraulic	Snubber Re	placement	- Type (HSSA	N-10)	-	
3. Tests Conducted:	Hydrostatic Pn Other Pressure	eumatic No None psi	ominal Operating Test Temp. N	Pressure one F			
NOTE: Supplemention in items 1 three recorded at the top	ital sheets in form of ough 6 on this report of this form,	lists, sketches, o t is included on e	or drawings may beach sheet, and (	pe used, provided (1 3) each sheet is nui	) size is 8% mbered an	in. x 11 in., (2) id d the number of s	nforma- sheets is

9.	Remarks Replacement of Hydraulic Snubber with certified Hydraulic Snubber
	(P.O. 45911) VT-3/VT-4 pre-service inspection performed. Reference
	inspection report no. 90-001.
	We certify that the statements made in the report are correct and this 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 None
	Signed , ASME Administrator Date February /2 1990 Owner or Owner's Designee, Title
Γ	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 Lumbermans Mutual Casualty Company of Long Grove, Illinois have inspected the components described
	in this Owner's Report during the period /-3/-90 to Z-26-90, 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.
	Commissions Nat'1 Bd. 5813(I) (N) IA-1041 National Board, State, Province, and Endorsements  Date February 26, 19 90
	Date February 26, 19 90

(12/82)

1. Owner Iowa	Electric Ligh	ht and Pow	er	Date Februar	y 7, 1	.990	<del></del>
•	Name 51, Cedar Ra			Sheet 1 o			
2. Plant Duane A	Address rnold Energy	Center		Unit 1			
3277 DAEC	Neme Rd., Palo, I	A 52324		PMAR 104			1
-	Address			Repeir Orgei	nization P	.O. No., Job No.,	etc.
3. Work Performed by	lowa Elect	ric Name	·	Type Code Symbol		None None	
3277 DAFC	Rd Palo I	· · • • · · · •		Authorization No		None	
<u> </u>	Rd., Palo, I	<u> </u>	<del></del>	Expiration Date			
4. Identification of Sys	stem RHR Heat	Exchanger	Discharge	(NW) (Class	2)		
<ul><li>5. (a) Applicable Cons</li><li>(b) Applicable Edition</li><li>6. Identification of Constant</li></ul>	ion of Section XI Uti	lized for Repairs	or Replacements	19 <u>80W81</u>	ddenda, _	N/A	Code Case
Name of Component	Name of Manufacturer	Manufacturer Seriel No.	National Board No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)
Hydraulic	Bergen	D. Arnold		GLE-008			
Snubber	Patterson	#55	None	-SS-240	1988	Replacemen	t No
7. Description of Work	Hydraulic :	Snubber Re	placement	- Type (HSSA	-3)		
8. Tests Conducted:	Hydrostatic Pn Other Pressure		ominal Operating Test Temp	Pressure None° F			
NOTE: Supplemention in items 1 thror racorded at the top	tal sheets in form of ough 6 on this report of this form,	lists, skatches, o	or drawings may leach sheet, and (	be used, provided (1) (3) each sheet is nun	size is 8% nbered an	in, x 11 in., (2) in the number of	nforma- sheets is

9.	Remarks Replacement of Hydraulic Snubber with certified Hydraulic Snubber
٥.	(P.O. 45911) VT-3/VT-4 pre-service inspection performed. Reference
	inspection report no. 90-002.
	CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this Replacement conforms to the rules of the repair or replacement.  ASME Code, Section XI.
	Type Code Symbol Stamp
	Certificate of Authorization No. None Expiration Date None  Signed 2  , ASME Administrator Date February /2 , 1990
L	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 Lumbermans Mutual Casualty Company of Long Grove, Illinois have inspected the components described in this Owner's Report during the period 1-31-90 to 2-26-90, 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.    Commissions   Nat'   Bd. 5813(I) (N) IA-1041     Date   Television   National Board, State, Province, and Endorsements

(12/82)

•	A				Sans India 1	0 1000		
	Owner <u>lowa Ele</u>	ctric Light and Po Name	wer		Date July I	<u>0, 1990</u>		
	B O Poy 351	Cedar Rapids, IA 5	2404		Sheet 1 of	2		
	P.U.BOX 331,	Address		<del></del>	sileet <u>i or</u>			
	Plant Duane Ar	nold Energy Center			Unit 1			
	rtant <u>Dualle Al</u>	Name			<u> </u>		<del></del>	
	3277 DAEC Pd	Palo, IA 52324				DMAD #1	045101	
	Addres		Repair (	Organization P.O.	No.,Job No.			
	Work Performed	by Iowa Electric			Type Code Symbol	Stamp	None	
	10. K   0 0	Name						
					Authorization No.		None	
	7077							
	32// DAEC ROB	d Palo, IA 52324 Address		<del></del>	Expiration Date		None	
	Identification	of System <u>Suct</u>	ion of Core Sp	ray (A) Pum	o (Class 2)			
	(a)Applicable Case	Const. Code <u>ASME</u> S	ECT. III	19 <u>_77</u>	Edition, <del>W77</del> _		_Addenda, <u>N-249,N</u>	-71,N-225 C
		Edition of Section	XI Utilizad f	or Repairs	or Replacements 19	80 W81		
	Identification	of Components Rep	airad or Repla	ced and Repi	lacement Component	s		
		1	1					
	·							ASME
	Name of	Name of	Manufacturer	Nationsl Board	Other	Year	Repaired Replaced,	Code Stampe
	Component	Manufacture	Serial No.	No.	Identification	Built	or Replacement	(Yes
								or No)
			<u> </u>		<u> </u>			
			2500-10					
raul	ic Snubber	Berg-Patter	866 2500-10	N/A	HBB-002-SS-300	1983	Replaced	No
raul	ic Snubber	Berg-Patter	865	N/A	HBB-002-SS-300	1983	Replacement	No
	•							
	·							<del>   </del>
							<u> </u>	<del> </del>
			,		L			
		•						
	Description of	Work <u>Hydraulic S</u>	nubber Replace	ment - Type	HSSA-10			
							•	
	Tests Conducta	d: Hydrostatic	Pneu	matic	Nominal	Operatio	n Pressure	П
				. <b>A</b> .	psi Test Tan	_ ^	4. A.	_
		Other -			DEKI JEST JAN	ID. '	· ·	
	Testad per STF	Other	PressureN	•		'	·	
		46H002	Pressure				•	
	Testad per STF before inatal	46H002				ad, prov		



Sheet 2 of 2

### FORM NIS-2 (Back)

1nspection	1 performed. Ref	erence Inspect	tion Report N	io. 90-192				
-			· · · · · · · · · · · · · · · · · · ·					
Applicable Manufacturer's Data Reports to attached inspection performed. Reference Inspection Report No. 90-192  CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. Mone Expiration  Signed Charles Stamp Sesignee, Title  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and P Inspectors and the State or Province of and employed by Authorization this Owner's Report during the period And state that to the best of my knowledge and belief, the Owner has performed examinatione and corrective measures described in the Owner's Report in accordance with the requirements of the ASME Code, Se By signing this certificate naither the Inspector nor his employer makes any warranty, express concerning the examinatione and corrective measures described in this Owner's Report. Furthermor Inspector nor his employer makes any warranty, express concerning the examinatione and corrective measures described in this Owner's Report. Furthermor Inspector nor his employer makes any warranty, express concerning the examinatione and corrective measures described in this Owner's Report. Furthermor Inspector nor his employer shall be Liable in any manner for any personal injury or property damage any kind arising from or compected with this inspection.  Commissions MB-27-9 (I) (N)  National Board, State, Province, and Determined Commissions State, Province, and Determined Commissions State, Province, and Determined Commissions State, Province, and Determined Commissions State, Province, and Determined Commissions State, Province, and Determined Commissions State, Province, and Determined Commissions State, Province, and Determined Commissions State, Province, and Determined Commissions State, Province, and Determined Commissions State, Province, and Determined Commissions State Code, State, Province, and Dete	•							
					,	<del></del>		
			CERTI	FICATE OF COMPL	.IANCE			
				report are corr	ect and this	replacement		_ cor
to the	rules of the AS	ME Code, Secti	on XI.			repair of	-eplacement	
ļ <u>.</u>	0	O N	_					
ļ ''	be code symbol	stamp <u>none</u>	!					
l	ertificate of Au	uthorization No	o. None			Fyr	nication Date	N.
i .								
Si	gned Surum	en Sha	upai 8-6	-9 codes & Ma	iterials, TGL	Date 8-	6-90	. 1
	Owner or	Owner's Design	ee, Title					
			CERTIFICAT	E OF INSERVICE	INSPECTION			
I, the	undersigned, h	olding a vali	d commission	n issued by the	e Nationel Bo	ard of Boile	r and Pressu	re V
Inspect	ors and the Sta	te or Province	of tou	a Tient	and employ	yed by Arriz	Components des	m 6
this Ow	mer's Report du	ring the perio	od	5-11-90	t	تر کے ۔	'- 5 <i>A</i>	
, and s	tate that to the	e Destot my Kno	owledge and b	belief, the Owne	r has performe	ed examinatio	ne and taken d	corre
By s	igning this cer	tificate naith	er the Inspe	ctor nor his em	miover makes	anv uarrantv	expressed or	ime
concerr	ling the examina	itione and corr	ective measu	res described i	n this O⊎ner':	s Report. Fu	inthermore no	ai the
any kir	or nor his emplo id arising from	over shall be a or conpected w	tiable in am with this ins	y manner for an pection.	y personat inj	ury or prope	rty damage or	a lo
		//		•	110000	(T)(4)	9411	٠
	Inspectors Sig	mature		COMMISSIONS_	lational Board	, State, Prov	ince, and Enc	orse
	0 0							
Deta	タージ	10 %	A					

o.,Job No.
o.,Job No.
Cc
ASME Code Stamper (Yes or No)
No
No
No
No
7U
Str ( or No

Note #1 - This pilot is a spare and the pressure test will be performed when installed in the plant.

sheet 2 of 2

CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp Hone  Certificate of Authorization No. Hone Expiration Date Nowner's Designee, Cittle  CERTIFICATE OF COMPLIANCE  Codes & Materials, TGL Date 7-27-  Owner or Owner's Designee, Cittle  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler of Hartford, Compecticut have inspected the components described in the Owner's Report during the period of Hartford, Compecticut have inspected the components described in the Owner's Report during the period of Signing this certificate noither the Inspector nor his amployer makes any warranty, expressed or inconcerning the examinations and corrective measures described in this Owner's Report. Furthermare, neit Inspector ner his employer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.  Commissiona NB 8829(1)(N) 941-1A  National Board, State, Province, and Endor				
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement  Type Code Symbol Stamp Hone  Certificate of Authorization No. Hone  Certificate of Authorization No. Hone  Certificate of Authorization No. Hone  Certificate of Authorization No. Hone  Certificate of Authorization No. Hone  Certificate of Authorization No. Hone  Certificate of Authorization No. Hone  Certificate of Authorization No. Hone  Certificate of Authorization No. Hone  Certificate of Authorization No. Hone  Certificate of Authorization No. Hone  Codes & Materials, TGL Date 7-27- , 19  Owner or Owner's Designee, Cittle  Certificate of Authorization No. Hone have inspected the components described of this Owner's Report during the period have inspected the components described in the Owner's Report in accordance with the requirements of the ASME Code, Section XI.  By signing this certificate noither the Inspector nor his amployer makes any warranty, expressed or imple concerning the examinations and corrective measures described in this Owner's Report. Furthermare, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss any kind arising from or connected with this inspection.  Commissions NB 8829(1)(N) 941-1A				
		CERTIFICATE OF COMPL	IANCE	
		the report are corre		
to the rules of	the ASME Code, Section XI.		repa	air or replacement
Time Code	Symbol Storm Hone			
Type Code	Symbol Stamp			<u> </u>
Certifica	te of Authorization No. H	one .		Expiration Date Non
				<del></del>
Signed	under Shaula	Codes & Ma	terials, TGL Date	7-27- 1
Oi	mer or Owner's Designee, Git	le		
	CERTI	FICATE OF INSERVICE	INSPECTION	
I, the undersi	gned, holding a valid commi	ssion issued by the	National Board o	f Boiler and Pressure V
Inspectors and	the State or Province of	AHOI	and employed by	Hartford Steam Boiler I&
this Owner's Re	eport during the period	3-30-90	to	8-11-90
, and state tha	t to the best of my knowledge	and belief, the Owne	r has performed exac	minations and taken corre
concerning the	examinations and corrective	measures described i	n this Owner's Repo	rt. Furthermare neither
Inspector ner h	nis employer shall be liable i	in any m <b>anner</b> for any	personal injury or	property damage or a lo
/ _		•	•	
Inspec	tors Signature			
	-	•	ariana santa, stat	e, i orine, and cidorsa
Date <u>Augu</u>	1 11 19 99	_		

			•			-		
1.	Owner <u>lowa Ele</u>	ectric Light and Po Name	HEL		Date <u>July 3</u>	1, 1990		
	P.O.Box 351,	Cedar Rapids, IA 5	2406		Sheet 1 of	2		
		Address						•
2.	Plant <u>Duane Ar</u>	nold Energy Center	,		Unit 1			
		Name					_	
	3277 DAEC Rd. Addres	. <u>Palo, IA 52324</u> ss					7) Organization P.O.	No., Job No.
3.	Work Performed	i by Target Rock			Type Code Symbol	Stamo	None	·
		Name			,, ,		None	
	•				Author (Zacron No.	•	NOIR	
	1966E Broadhol	low Rd. Farmingdal Address		0919	Expiration Date		None	<del></del>
4.	Identification	n of System <u>Main</u>	Steam (Class	1)				
•			Occum (occus	<del>''/</del>				
5.*		Const. Code ASME S	ECT. III	19_68_	Edition, <u>W68</u>		_Addenda,/	N ACode
	Case (b)Applicable	Edition of Section	XI Utilized f	or Repairs	or Replacements 19	80 W81		
•	* GE SPEC.	21A9206 Rev. 6 & 7	7					
6.	Identification	of Components Rep	airod or Ropla	ced and Repl	lacement Component	8		
				· · · · · · · · · · · · · · · · · · ·				ACME
				National			Repaired	ASME Code
	Name of Component	Name of Manufacture	Manufacturer Serial No.	Board No.	Other Identification	Year Built	Replaced, or Replacement	Stamped (Yes
			İ					or No)
							<del> </del>	-
			<u> </u>					
4SRV Pi	lot Valve	Target Rock	S/N 218	N/A	SPARE	1975	Repaired	Yes
	7.77E-12.12.1							
	-							
								<u>†                                      </u>
				L	<u> </u>		<u></u>	<u>.                                    </u>
7.	Description of	Work New second	stage seet wel	ded into val	ve body. Pilot di	sc. S.S.	discs skim-cut &	polished
							•	
8.	Tests Conducte	d: Hydrostatic	Pneu	metic	Nominal (	Operatin	g Pressure	
		Other * 🗶	Pressure113	30 +/- 1%	psi Test Tam	mp. <u>50</u>	°F	
*\$	et pressure tes	t performed at WYLE	La <b>bs</b>					
	NOTE: Suppleme	ntal sheets in for	m of lists, sk	etches, or o	drawings may be us	ed, prov	vided (1) size is	8½ in. x 11
	in.,(2)informa	tion in items 1 th sheets is recorded	rough 6 on thi	s report is	included on each	sheet, a	ind (3) each sheet	t is numbered a

FORM NIS-2 (Back) sheet 2 of 2

ody & pilot disc and second stage disc were lapped.  S.S. seat by DAEC QA. Vt-3 of valve internals per		
CERT	TIFICATE OF COMPLIANCE	
We certify that the statements made in the to the rules of the ASME Code, Section XI.	repart are correct and t	this <u>repair</u> co
Type Code Symbol StampN/A	•	
Certificate of Authorization No.	N/A	Expiration Date
Signed Sumulu Shau Owner or Owner's Designee, Title	Codes & Materials,	TGL Date <u>8-7-</u> ,
CERTIFICA	TE OF INSERVICE INSPECTION	
I, the undersigned, holding a valid commission inspectors and the State or Province of of Hartford, Connecticut this Owner's Report during the period, and state that to the best of my knowledge and	Taura and a	
, and state that to the best of my knowledge and measures described in the Owner's Report in acc	belief, the Owner has per ordance with the requirer	rformed examinatione and taken correction XI.
By signing this certificate neither the Insp concerning the examinations and corrective meas Inspector nor his employer shall be liable in a any kind arising from or connected with this in	ures described in this O My manner for any persona	mer's Report. Furthermore, meith
Inspectors Signature	Commissions NB 88	129(I)(N) 941-IA Board, State, Province, and Endors

_==								
1.	Owner <u>Iowa Elect</u>	ric Light and Pow Name	er		Date <u>July 3</u>	1, 1990		
	P.O.Box 351, Ce	dar Rapids, IA 52 Address		·	Sheet 1 of	2	<del> </del>	
2.	Plant_Duane_Arno				Unit 1			
٤.	Ptant Duane Airio	Name			<u> </u>			
			···		P.O. B02568 (CM	AR 92908	3)	
	Address					•	rganization P.O.M	·
3.	Work Performed b				Type Code Symbol			
					Authorization No.		None	
	1966E Broadhollo	w Rd. Farmingdale Address		0919	Expiration Date _	·····	None	
4.	Identification o	f System <u>Main</u>	Steam (Class	1)	. <u></u> .			
						••		
5.*	(a)Applicable Con Case	nst. Code <u>ASME</u> SE	CT. III	19 <u>68</u>	_ Edition, <u>W68</u>	<del></del>	_Addenda,	<u>I/A</u> C∝
	(b)Applicable Ed	ition of Saction IA9206 Rev. 6 & 7		or R <mark>epairs</mark> o	r Replacements 19	80 W81	_	
6.	Identification o	f Components Repo	mired or Repla	ced and Repl	acement Component	8		
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
					·			GI NO)
MSRV Pi	lot Valve	Target Rock	S/N 203	N/A	SPARE	1975	Repaired	Yes
-								
·		<u> </u>	<u> </u>			<u> </u>	1	
7.	Description of W	ork <u>Bellows and</u>	new pilot sea	t welded int	o valve body		· · · · · · · · · · · · · · · · · · ·	
8.	Tests Conducted:	Hydrostatic	Pneu	metic	Nominal (	Operatin	g Pressure	
		Other * 🗶	Pressure 114	0 +/- 1%	psi Test Tam	<b>.</b> 550	)°F	
<b>*</b> Se	et pressure test ;	performed at WYLE	Labs					

sheet 2 of 2

		•	ot & 2nd Stage b	w DAEC QA. Vt-3 inspec	tion
pilot valve assembly was performed	under ISI# 89-4	162			
Type Code Symbol Stamp N/A  Certificate of Authorization No. N/A Expiration Date  Signed Commissions N/A  Certificate of Authorization No. N/A Expiration Date  Codes & Materials, TGL Date 8-7-  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 Inspectors and the State or Province of lows and employed by Hartford Steem Boiler of Hartford, Connecticut have inspected the components described in the Owner's Repart during the period to province of the Components of the ASME Code, Section X  By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or is concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neit Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a any kind arising from or enhected with this inspection.  Commissions NB 8829(1)(N) 941-1A					
					—
			•	<del></del>	—
	CERTI	FICATE OF COMPLIA	WCE		
We certify that the statemen	nts made in the	report are correc	t and this	repair	con
to the rules of the ASME Code, Sa	action XI.				
Ondo Ontol Onno					
Type Code Symbol StampN	1/A				
Cartificate of Authorization	n Ma	W/A		Evaination Date	N.
_					
signed Surveyer S	Laugan	Codes & Matr	eriale TGI Na	* 8-7-	1
Owner or Owner's Des	signee, Title	Codes a nati	11 1013, (ML )	te	_, '
	CERTIFICAT	E OF INSERVICE IN	ISPECTION		
I. the undersigned, holding a v	valid commission	issued by the	National Roard	of Roiler and Pressur	• • · · ·
inspectors and the State or Provi	ince of	IOMS	and employed b	W Hartford Steem Boile	er I
this Owner's Repart during the pe	<u>d, Connecticut</u> eriod	5-2-98	have inspec	ted the components desc	erib
, and state that to the best of my	knowledge and b	celief, the Owner	has performed ex	kaminations and taken co	OFF
By signing this certificate ne	either the Inspe	ctor nor his empl	oyer mekes any	warranty, expressed or	imp
Inspector nor his employer shall	be liable in am	v manner for anv i	tnis owner's ke personal injury	or property damage or	i <b>the</b> a lo
any kind arising from or connecte	ed with this ins	pection.		• • • •	
sur Inul		Commissions	NB 8829(I)(N)	941-IA	
Inspectors Signature		Nat	tionsl Board, St	ate, Province, and End	orse
Date august // 19	a n			-	

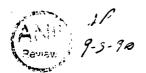
1.	Owner Iowa Elect	ric Light and Po	Her		Date <u>August</u>	11,1990	)		
	P.O.Box 351, Ce	dar Rapids, IA 5		-	Sheet 1 of	2			
2.	Plant Duane Arno	ld Energy Center			Unit <u>1</u>				
	3277 DAEC Rd.	Palo, IA 52324				CMAR #A	02652		_
	Address					Repair	Organization P.O.	No.,Job No.	•
3.	Work Performed b	y <u>Iowa Electric</u> Name			Type Code Symbol	Stamp_	None		
					Authorization No.	•	None		
	3277 DAEC Road	Palo, IA 52324 Address			Expiration Date		None		
4.	Identification o	f Systam <u>Reac</u>	tor Water Clea	nup System	(Class1)				
5.	(a)Applicable Co	nst. Code ANSI B3	31.7	19 <u>69</u>	Edition, <u>71</u>		Addenda,	N/A	_Code
	(c)Construction	on code of Replac	ement Code <u>Sec</u>	tion III 19	or Replacements 19 83 Edition,	S85_AC	ldenda		
<b>5.</b>	Identification o	f Components Repa	sired or Repla	ced and Rep	lacement Component	.8			
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)	
4 studs	for	Pandinal	204			4004			
8 nuts		Cardinal Cardinal	006	N/A N/A	DCA-14-SS-73 DCA-14-SS-73	1986 1986	Replacement Replacement	No No	
<del></del>									
·.	Description of W	ork <u>Removed hang</u>	er clamp for	UT access. F	Replacing studs/nu	ts with	higher grade mate	erial	
<b>3.</b>	Tests Conducted:	Hydrestatic'	Pneus	metic	Nominal (	Operatio	n Pressure		
	•	Other	Pressure	N/A	psi Test⊺an	тр	N/A°F		
-	NOTE: Supplementa in.,(2)information the number of sho	on in items 1 thr	ough 6 on thi	s report is	drawings may be us included on each	ed, prov sheet, a	vided (1) size is and (3) each sheet	8½ in. x 1 : is number	1   red a



FORM NIS-2 (Back) sheet 2 of 2

	· · · · · · · · · · · · · · · · · · ·				·····	
		CERTIF	ICATE OF COMPL	ANCE		
	fy that the statement of the ASME Code, Sec		eport are corre	et and this _	replacement repair or re	placement cor
Type Coo	le Symbol Stamp <u>No</u>	one				
Certific	ate of Authorization	No. <u>None</u>		<u>-</u>	Expi	ration Date
Signed	Sumulu Souner or Owner's Des	shaufan ignee, Tithe	Codes & Ma	terials, TGL	Date8	<u>- 18-</u> , 1
		CERTIFICATE	OF INSERVICE	INSPECTION		
Inspectors ar	signed, holding a va nd the State or Provin Hartfor	nce of d. Connecticut	Iowa	and employed have ins	d by <u>Hartfor</u> pected the co	d Steam Boiler I
, and state t	Report during the per hat to the best of my cribed in the Owner's	knowledge and be	lief, the Owner	has performed	examinations of the ASME C	s and taken corre
concerning the Inspector nor	this certificate ne e examinations and co his employer shall t ing from or connected	orrective measur be liable in any	es described in manner for any	n this Owner's	Report. Fur	thermore, neithe
Inspi	tors Signature		_ Commissions_ N	NB 8829(I)(N) ational Board,	941-IA State, Provi	nce, and Endorse
	93 19_			•		•

•	Owner <u>lowa Elect</u>	ric Light and Po Nema	wer		Date <u>August</u>	11,1990	)		
	P.O.Box 351, Ce	dar Rapids, IA 5	2406		Sheet <u>1 of</u>	2			
		Address							
•	Plant Duane Arno	old Energy Center Name			Unit1				
	3277 DAFC Rd.	Palo. IA 52324				CMAD #0	91149 (EMA)		
•	Address	TOTOL IN SECTION				Repair (	Organization P.O.	No., Job N	<del>o</del> .
	Work Performed b				Type Code Symbol	Stamp	None		
		Name:			Authorization No.	•	Nona		
•	3277 DAEC Roed	Palo, IA 52324			Expiration Date		None		
		Address							÷
	Identification o	f System <u>RHR</u>	(Class 2)						
. (	(a)Applicable Co	nst. Code ANSI B	31,7 (pipe)	19 69	Edition, 71		Addenda,	N/A	Coc
(	Case .				or Replacements 19				
	(c) Applicable	e Const. CodeSect	ion III (valv	e)19 71	Edition, W71 A	ddenda	<del></del>		
1	Identification o	f Components Repo	pired or Repla	ced and Rep	lacement Component	cition w	1972 accence		
		1				<u> </u>		1 7	
	Name of component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)	
" Pipe		Jss	n/a	N/A	2"-HBB-23	1971	Ropiacement	No	
" stop	valve	velan val.	38.1-1	N/A	v-19-27	1974	Replacement	yes	
0	Description of W	ork <u>Removed old</u>	valve and rep	laced new or	ne also added pipe	for fit	: up		
1					_			_	
ו	Tests Conducted:	_	ت	metic	Nominal (	Operatio	n Pressure		
		Other	Pressure	190	psi Test Tam	<b></b>	<u>80                                    </u>		
<b>A</b> I	107E . C	al abases :- 6	4 12c+- ·		drawings may be us			<b></b> .	



sheet 2 of 2

	CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are corract and this replacement repair or replacement  Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Symbol Stamp Codes Symbol Stamp Codes & Materials, TGL Date 8-18-1, 19  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Verlangement of Lower and employed by Hartford Steam Boiler Inspectors and the State or Province of Lower and employed by Hartford Steam Boiler Inspectors and the State or Province of Lower and employed by Hartford Steam Boiler Inspectors and employed by Hartford Steam Boiler Inspectors and the State or Province of Lower and employed by Hartford Steam Boiler Inspectors and the State or Province of Lower and employed by Hartford Steam Boiler Inspectors and the State or Province of Lower and employed by Hartford Steam Boiler Inspectors and the State or Province of Lower and employed by Hartford Steam Boiler Inspectors and the State or Province of Lower and Employed by Hartford Steam Boiler Inspectors and the State or Province of Lower and Employed by Hartford Steam Boiler Inspectors and the State or Province of Lower and Employed by Hartford Steam Boiler Inspectors and the State or Province of Lower and Employed by Hartford Steam Boiler Inspectors and Pressure Verlands and Employed by Hartford Steam Boiler Inspectors and Pressure Verlands and Employed by Hartford Steam Boiler Inspectors and Pressure Verlands				
acceptable. Hy	drostatic test performed	<u> under ISI # 90-00</u>	07.		
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are corract and this replacement repair or replacement  Type Code Symbol Stamp None  Certificate of Authorization No. None Expiration Date  Signed Symbol Stamp Title  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of Iowa and employed by Nartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Owner's Report during the period Symbol State that to the beast of my knowledge and belief, the Owner has performed examinations and taken corr measures described in the Owner's Report in accordance with the requirements of the ASME Code, Section XI  By signing this certificate neither the Inspector ner his employer makes any warranty, expressed or monocordance in this Owner's Report. Furthermore, neither concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither concerning the examinations and corrective measures described in this Owner's Report.					
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are corract and this replacement conto the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None Expiration Date  Signed Conner or Owner's Designeed Title  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the Nationel Board of Boiler and Pressure V. Inspectors and the State or Province of Iowa and employed by Nartford Steam Boiler II have inspected the components describe this Owner's Report during the period And Designeed Title The Owner is Report during the period And Designeed Title Owner's Report during the period And Designeed Title Owner is Report during the period And Designeed Title Owner is Report during the period And Designeed Title Owner is Report during the period And Designeed Title Owner is Report during the period And Designeed Title Owner is Report during the period And Designeed Title Owner is Report during the period And Designeed Title Owner is Report during the Owner's Report in accordance with the requirements of the ASME Code, Section XI.  By signing this certificate neither the Inspector ner his employer makes any warranty, expressed or imp concerning the examinations and corrective massures described in this Owner's Report. Furthermore, neither Inspector nor his employer shall be Liable in any warner for any personal injury or property damage or a local property					
<del> </del>	· <del>-</del> · · · · · · · · · · · · · · · · · · ·				
		CERTIFICATE	OF COMPLIAN	Œ	
We cert	ify that the statements	made in the report	are corract	and this replac	cement co
Type Co	de Symbol Stamp <u>None</u>	<u> </u>			
	•				
Certifi	cate of Authorization No	. None			Expiration Date
	Gus. 4 00				0.10.
Signed	Company of Company of Company	wan c	odes & Mater	ials, TGL Date	8-10-
	Owner or Owner's Design	eey nicle			
		OFFITIELE OF 1	W055111.05 1W0		-
					•
I, the under	rsigned, holding a valid	d commission issue	ed by the Na	tionel Board of	Boiler and Pressure
of	Hartford,	Connecticut		have inspected	the components descri
this Owner's	Report during the perio	d 5-18.	90	to	9-3-90
maasures des	that to the best of my kno cribed in the Owner's Re	owledge and beliet, port in accordance	, the Owner ha with the rec	as performed exami Buirements of the	inations and taken corre ASME Code. Section XI
					·
concerning t	y this certificate neith he examinations and corr	er the inspector n ective maasures de	er his employ scribed in th	yer makes any war nis Owner's Recor	ranty, expressed or implement. Furthermore, neither
Inspector no	r his employer shall be I	liable in any manne	er for any pe	rsonal injury or	property damage or a le
any Kind aris		•			
_A	M /rule	Com	missionsNE	8829(I)(N) 941	-IA
Insp	ectors Signature		Nati	onsi Board, State	, Province, and Endorse
•					
0.00	<u>9-7</u> 19 91	17			

1.	Owner <u>Iowa Ele</u>	ctric Light and Po	wer		Date <u>August</u>	13,1990			
		Name							
	P.O.Box 351,	Cedar Rapids, IA 5	2406		Sheet 1 of	2	_		
		Address			<del>.</del>				
_					11-24				
2.	Plant Duane Ar	nold Eneg Center Name			Uniti				
		Nelic							
	3277 DAEC Rd.	Palo, IA 52324				CMAR #A			_
	Addres	18				Repair (	organization P.O.	No.,Job No	).
3.	Uark Derformed	by Iowa Electric			Type Code Symbol	Stomn	None		
<b>J.</b>	WOLK LELLOLINES	Name							
					Authorization No.		None		
	3277 DAFC Roa	d Palo, IA 52324			Expiration Date		None		
	JETT BREG KOG	Address	· · · · · · · · · · · · · · · · · · ·		inprocessing sales				
4.	Identification	of System <u>RHR</u>	(class 2)						
5.	(a)Applicable	Const. Code ANSI B	31.7	19 69	Edition, 71		_Addenda,	N/A	_Code
	Case								_
	(b)Applicable	Edition of Section	XI Utilized f	or Repairs	or Replacements 19	80 W81	class 2		
					•				
6.	Identification	of Components Rep	aired or Repla	ced and Rep	lacement Component	:s			
			1	Manianal			Barraiana	ASME Code	
	Name of	Name of	Manufacturer	Nationsl Board	Other	Year	Repaired Replaced,	Stamped	
	Component	Manufacture	Serial No.	No.	Identification	Built	or Replacement	(Yes	
	,					ł		or No)	
			1					1	
		·						1	
	hanger lug								•
RHF-CE-	-123	Bechtel	n/a	N/A	GBB-5-H-20	1978	Repair	No	
							į.		
			1			<u> </u>			
		-	1						
			+		ļ	-		-	
			1 .						
		•	*		•	•			
7	Decemination of	Hank Baraunt of	4M limon indi	antian an b					
7.	vescription of	Work <u>Removal of</u>	i" (Inear Ingl	cation on n	enger (ug				
		•							
8.	Tests Conducte	d: Hydrostatic	Pneu	matic	Nominal	Operatio	n Pressure		
			_					_	
		Other	Pressure	N/A	psi Test Ter	₽·	<u> </u>		
	NOTE: Suppleme	ntal sheets in for	m of lists, sk	etches, or	drawings may be us	ed, prov	rided (1) size is	8½ in. x	11
	in.,(2)informo	tion in itema 1 th	rough 6 on thi	s report is					
		chapte is recorded							



sheet 2 of 2

	s <u>14 linear indication discovered during ISI(MT) of hang</u> Applicable Manufacturer's Data Repor	rts to be attached
Perform	rmed Mt exam under same inspection number 89-324 and wes	acceptable.
	CERTIFICATE OF CO	MPLIANCE
to th	We certify that the statements made in the report are content in the r	orract and this <u>repair</u> co
	Type Code Symbol Stemp None	
	Certificate of Authorization No. Nons	Expiration Date
	Signed Stude Staupan Codes & Owner or Owner's Designee, Title	Materials, TGL Date 8- 18-
	CERTIFICATE OF INSERVIO	CE INSPECTION
I, th	the undersigned, holding a valid commission issued by mectors and the State or Province of	and employed by Hartford Steam Boiler
this	Owner's Report during the period	have inspected the components descri
, and	d state that to the best of my knowledge and belief, the Ow ures described in the Owner's Report in accordance with t	wher has performed examinations and taken corr
Inspe	y signing this certificate neither the Inspector nor his erning the examinations and corrective measures described ector nor his employer shall be liable in any manner for kind arising from or connected with this inspection.	d in this Owner's Penart Furthermore neith
1	Lett Szeler Commission	ns NB 8829(I)(N) 941-IA
	Inspectors Signature	National Board, State, Province, and Endors
Date_	<u>9-3</u> 19 <u>90</u>	

1.	Owner Ioua Fiect	ric Light and Pow	er		Date August	24 1990			
•		Name							
	P.O.Box 351, Ce	dar Rapids, IA 52 Address	406		Sheet 1 of	2		· <u></u>	
2.	Plant Ruane Arno	ld Energy Center			Unit 1				
••	Ptant Dane Arno	Name							
		Palo, IA 52324		<del></del> ,		CMAR #A	00578		_
	Address					Repoir (	Organization P.O.N	lo.,Job No	٥.
3.	Work Performed b	y <u>lowa Electric</u> Name			Type Code Symbol				
		N-LINE			Authorization No.	•	None		
	3277 DAEC Roed	Palo, IA 52324 Address		<del></del>	Expiration Date		None		-
<b>.</b>	Identification o	f System <u>Main</u>	Steam "C" lin	e (class 1)					<u> </u>
							•		
5.	(a)Applicable Co Case	nst. Code <u>ANSI 83</u>	1.1	19 <u>_67</u>	Edition,		Addenda,	N/A	Code
	(b)Applicable Ed	ition of Section	XI Utilized f	or Repairs	or Replecements 19	80 W81	class 2		
5.	Identification o	f Components Repa	ired or Repla	cod and Repl	lacement Component	:8			
	Name of Component	Name of Manufecture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)	
Weld	MSC-J009	General Electric	PS-1-C2	N/A	Main steam 'c'	1973	Repoir	No	
									ĺ
7.	Description of W	ork <u>Remaval of 1</u>	/2" in length	. 1/16" wid	th linear indicati	on at th	e toe of the weld	<u></u>	1
3.	Tests Conducted:	Hydrostatic	Pneu	metic	Nominal (	Operatio	n Pr <b>es</b> sure		
		Other	Pressure	N/A	psi Test Ten	mp	N/A °F		
		*							
					drawings may be us included on each				
		eets is recorded			INCOMES OF EACH	meet, c	ne (3) each sheet	. ra munice	51 <b>CU</b> 6



### FORM NIS-2 (Back) sheet 2 of 2

CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this repair conformed Symbol Stemp None  Cartificate of Authorization No. Nons Expiration Date  Signed Code Symbol Stemp Codes & Materials, TGL Date 8-25-, 19  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Ves Inspectors and the State or Province of Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components described and employed by Hartford. Connecticut have inspected the components and employed by Hartford.				
thickness was verified by UT, minimum wall required .902"; as left 1.003".  CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this repair repeir or replacement  Type Code Symbol Stemp None  Cartificate of Authorization No. Nons Expiration Date  Signed Commer's Designee, Tible  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of Iowa and employed by Nartford Steam Boiler have inspected the components described in the Owner's Report during the period 22222 and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corn measures described in the 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 improved and issing from or cognected with this inspection.  Add Acad Commissions NB 8829(1)(N) 941-1A				
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this repair repeir or replacement  Type Code Symbol Stemp None  Cartificate of Authorization No. Nons Expiration Date  Signed Commer's Designee, Title  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of Iowa and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Owner's Report during the period 100 August 100				
	***		44.	
		CERTIFICATE OF COMP	LIANCE	
We certif	fy that the statements made i	in the report are cor	rect and this <u>repa</u>	ir cor
We certify that the statements made in the to the rules of the ASME Code, Section XI.  Type Code Symbol Stemp None  Cartificate of Authorization No. Nons  Signed Owner or Owner's Designee, Title  CERTIFICAT  I, the undersigned, holding a valid commission Inspectors and the State or Province of this Owner's Report during the period, and state that to the best of my knowledge and be measures described in the Owner's Report in according to the state of the State or Province of the State of the Sta		repe	eir or replacement	
Time Code	Sumbal Charm Nama	•		
l lype code	s symbol stemp <u>wone</u>			
Cartifica	ate of Authorization No	Nons		Expiration Date
,	C O.D.	0- `		
Signed	Sumbushan	Codes & M	aterials, TGL Date	8-25-
	Juner or Univers Designee, 11	me		
	(FD)	TIFICATE OF INCERVICE	INSPERTION	
		_		
I, the unders	ingned, holding a valid committee of	mission issued by th	e Nationsl Board of and employed by	f B <b>oiler and Pressure V</b> <u>Hartford</u> Steam Boiler I
l of	Hartford, Conne	cticut	have inspecte	d the components describ
, and state the	at to the best of my knowledg	ge and belief, the Own	er has performed exa	minations and taken corre
measures descr	ibed in the Owner's Report i	in accordance with the	e requirements of th	e ASME Code, Section XI.
By signing	this certificate neither the	Inspector nor his e	mployer makes any wa	rranty, expressed or imp
Inspector nor	his employer shall be liable	e in a <mark>ny manner</mark> for an	ny personal injury or	property damage or a lo
any kind arisi	ing from or commected with th	iis inspection.		
Sin	1 / rester	Commissions	NB 8829(1)(N) 94	1-1A
i inspec	ctors Signature		National Board, Stat	e, Province, and Endorse
<u> </u>	9-3 1998	•		

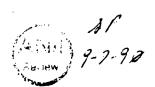
	Owner <u>Iowa Electi</u>	ric Light and Pow Name	ier		Date Augu	ist 25,1990		
	P.O.Box 351, Cer		2406		Sheet <u>1 c</u>	of 2		
		Address			<del></del>			
	Plant Duane Arno				Unit1		-i	
		Name						
	3277 DAEC Rd.	Palo, IA 52324				PMAR #1	045061, P.O. 5155	5
	Address					•	organization P.O.	40.,JOD NO.
	Work Performed by	/ <u>lowa Electric</u> Name			Type Code Symb	ol Stamp	None	
		None			Authorization	No	None	
	-							
	3277 DAEC Road				Expiration Dat	e	None	
		Address			•			
	Identification o	f System <u>MAIN</u>	STEAM 'D' (CL	ASS 1)	-			
					- 11. 1 · · · ·			
	(a)Applicable Co	nst. Code <u>ANSI B</u>	31.1	19 <u>_67</u>	Edition,NO	NE	_Addenda,NOI	NEC
	(b)Applicable Ed	ition of Saction	XI Utilized f	or Repairs	or Replacements	19 <u>80 W81</u>	Handa 16// E Cade	Cooot
	(c)Construction *Item replace	on code of Replac Id built to this	ement ITEM <u>Sec</u> construction (	<u> </u>	74 Edition,	AG	denda 1644-5 Code	e case-
	Identification of				lacement Compon	ents		
	•		1		T			
		1		National		İ	Repaired	ASME Code
	Name of	Name of	Manufacturer	Board	Other	Year	Replaced,	Stampe
	Component	M <b>anu</b> factur <b>e</b>	Serial No.	No.	Identification	on Built	or Replacement	(Yes or No)
		·						
		Pacific-				4000	1	†
	ical Snubber	Scientific Pacific-	SN9549	N/A	EBA-X7D-SS-00	1982	Replacad	No
chani		Pacific-				1		1 1
***	ical Snubber	Scientific	SN9553	N/A	EBA-X7D-SS-00	1982	Replacement	No
	ical Snubber		SN9553	N/A	EBA-X70-SS-00	1982	Replacement	NO
	ical Snubber		SN9553	N/A	EBA-X7D-SS-00	1982	Replacement	No
	ical Snubber		SN9553	N/A	EBA-X7D-SS-00	1982	Replacement	No
	ical Snubber		SN9553	N/A	EBA-X7D-SS-00	1982	Replacement	No
		Scientific					Replacement	No
	ical Snubber  Description of W	Scientific					Replacement	No
echani	Description of W	Scientific	ober for funct	ionsl test.	Formerly ID no.	SSD-1-MS		No
		Scientific	ober for funct		Formerly ID no.	SSD-1-MS	Replacement  n Pressure	No
	Description of W	Scientific	ober for funct	ionsl test.	Formerly ID no.	SSD-1-MS		
	Description of W	scientific  ork <u>Replace snu</u> Hydrostatic	bber for funct	ionsl test.	Formerly ID no.	SSD-1-MS	n Pressure	



FORM NIS-2 (Back) sheet 2 of 2

Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Sumular Codes & Materials, TGL Date 8 - 25 - , 19  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure V. Inspectors and the State or Province of Iowa and employed by Hartford Steem Boiler is this Owner's Report during the period 5-1/-12 to 8-29-90, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corresponding this certificate neither the Inspector nor his employer makes any warranty, expressed or imp				
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the repart are correct and this replacement conto the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None Expiration Date  Signed Sumulus Codes & Materials, TGL Date 8 - 25 - , 19  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 Volume of Iowa and employed by Nartford Steem Boiler II have inspected the components describe this Owner's Report during the period F-1/-10 to F-10-90, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken correct				
		CERTIFICATE OF COMPLI	ANCE	
. We certif	fy that the statements made in	the repart are corre	et and this reol	acement co
		the repair are corre		
Type Code	e Symbol Stamp None	····	<del></del>	<del></del>
giii		1		Funiant a Bas
Certifica	ate of Authorization NoN	ione		Expiration Date
Signed	Surudu Shau	Pair Codes & Mat	erials IGL Date	8 - 25-
0	Dwner or Owner's Designee, Tit	Úe.	<u> </u>	
				· · · · · · · · · · · · · · · · · · ·
	CERTI	IFICATE OF INSERVICE I	NSPECTION	
I, the unders	igned, holding a valid commi	ission issued by the	National Board o	f Boiler and Pressure
I <b>nspec</b> tors and of	the State or Province of Hartford, Connec	lowa ticut	_ and employed by have inspects	<u>Hartford Steem Boiler</u>
this Owner's R	Report during the period	5-31-9	2 to	8-30-98
, and state the measures descr	at to the best of my knowledge ribed in the Owner's Report in	eand belief, the Owner I accordance with the	has performed exa requirements of th	mi <b>nations and t</b> aken cor Le ASME Code. Section XI
				-
concerning the	e examinetions and corrective	measures described in	this Owner's Repa	rt. Furthermore, neith
Inspector nor	his employer shall be liable	in any manner for any	personal injury of	r property damage or a
	N // 1	•		
- /3-1	or pusion	Commissions	NB 8829(I)(N) 94	1-IA
inspec	ctors Signature	Na	itional Bosrd, Stat	te, Province, and Endors

	Owner <u>lowa Elect</u>	ric Light and Po	wer		Date <u>August</u>	25,1990	)	
	P.O.Box 351, Ce	edar Rapids, IA 5		<u></u>	Sheet <u>1 of</u>	2		
		Address						
	Plant Duane Arno	old Energy Center			Unit 1			
		Name						
	3277 DAEC Rd.	Palo, IA 52324				DMAD #1	045060, P.O. 5115	<b>c</b>
	Addresa						Organization P.O.	
	Work Performed h	W Inwa Flectric			Type Code Symbol	Ctom	None	
	WOLK LOLLOWING	Name		<del></del>				
					Authorization No	•	None	
	3277 DAEC Road	Palo, IA 52324 Address			Expiration Date		None	
	Identification o	of System <u>HPCI</u>	-STEAM SIDE (	LASS 1)				
	(a)Applicable Co	nst. Code <u>ANSI B</u>	31.7	19 <u>_69</u>	Edition, NONE		_Addenda,NOI	VE
	Case	•		· .	or Replacements 19			
	(c)Construction	on code of Replac	ement ITEMSec	tion III 19	74 Edition,	<u>'00 ₩81</u> ⊌76 Ad	 Idenda 1644-5 Code	Case*
	*Item roplaca	ad built to this	construction	code				Case
	Identification o	f Components Rep	mired or Repla	acad and Rep	lacement Component	8		
	,	T			1		T	<del></del>
								ASME
	Name of	Name of		National	200		Repaired	Code
(	Component	Manufacture	Manufacturer Serial No.	Board No.	Other Identification	Year Built	Replaced, or Replacement	Stamped (Yes
			1	,,,,,	- Galler House Con	Juint	or repracement	or No)
		Pacific-						
hanid	cal Snubber	Scientific	SN1889	N/A	DLA-003-SS-003	1977	Replacad	No
hanid	cal Snubber	Pacific- Scientific	SN26375	N/A	DLA-003-SS-003	1983	Seni sesment	
	out Grazzo	perenerrie	3420373	7/4	DLA-003-33-003	1703	Replacement	No
				<u> </u>				
					<del> </del>			
		<u> </u>		<u> </u>	<u> </u>	L.,		
		•						
l	D <b>escription</b> of W	ork <u>Replace snut</u>	ber for funct	ional test.				
	Tests Conducted:	Hydrostatic	Pneu	matic	Nominal (	Doeratio	n Pressure	$\neg$
		· .				-рол - о . о.		
		Other	Pressure	N/A	psi TestTen	p	<u>N/A</u> °F	
	NOTE: Supplementa	al sheets in form	of lists, sk	etches. or d	lrawings mey be us	ed. prov	ided (1) size is	8% in. x 11
	in.,(2)informetic	on in items 1 thr	ough 6 on thi	s repart is	included on each	sheet, a	nd (3) each sheet	is numbere
,	the number of she	eets is recorded	at the top of	this form.				
	•							



FORM NIS-2 (Back) sheet 2 of 2

	CERTIFICATE OF COMPLIANCE
tc	We certify that the statements made in the repart are correct and this <u>replacement</u> contact the rules of the ASME Code, Section XI.
	Type Code Symbol Stamp None
	Certificate of Authorization No. Nons Expiration Date
	Signed Sumular Sharpan Codes & Materials, TGL Date 8-25-, 19 Owner or Owner's Designee, Title
	CERTIFICATE OF INSERVICE INSPECTION
In	the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Volspectors and the State or Province of <u>Iowa</u> and employed by <u>Hartford Steem Boiler 18</u> of <u>Hartford, Connecticut</u> have inspected the components describe
Ι,	tis Owner's Repart during the period $3-3/-9-8$ to $9-9-9-8$ and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken corresponded in the Owner's Repart in accordance with the requirements of the ASME Code, Section XI.
In	By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or imponderning the exeminations and corrective measures described in this Owner's Report. Furthermore, neither ispector nor his employer shall be liable in any manner for any personal injury or property damage or a long wind arising from or connected with this inspection.
ı	Sent / resure Commissions NB 8829(1)(N) 941-1A

	Owner Iowa Electi	ric Light and Po	wer		Date August	27, 1990			
•	Owner Town Creek	Name			<u></u>				
	P.O.Box 351, Ced				Sheet <u>1 of</u>	2			
		Address							
	Plant Duane Arnol	d Energy Center Name	<del></del>		Unit 1				
						4-			
	3277 DAEC Rd. F Address	elo, [A 52324	· ·		<del></del>	CMAR #A Repair (	Organization P.O.	O.,Job No.	•
	Work Perforded by	/ Iowa Electric	•		Type Code Symbol	Stamo	None		
	,	Name			••		None		
					Authorization No.	'	NOTIC		
	3277 DAEC Road F	Palo, IA 52324			Expiration Date		None		
		Address			_				
	Identification of	System <u>Main</u>	Steam Bypass	line (Class	2)		. <del></del>		
			•						
	(a)Applicable Cor	nst. Code <u>ANSI B</u>	31.1	19 <u>_67</u>	Edition,		Addenda,	N/Å	_Code
		iti <b>on</b> of Section	XI Utilizad f	or Repairs o	r Replacements 19	80 W81	class 2		
		•							
	Identification of	Components Rep	airad or Repla	cad and Repl	acement Component	8			
			1		1				
				National			Repaired	ASME Code	
	Name of	Name of	Manufacturer	Board	Other	Year	Replaced,	Stamped	
	Component	Manufacture	Serial No.	No.	Identification	Built	or Replacement	(Yes or No)	
•									
			spool #			4074	_		
≱ld MS	E-CF009	Bechtei	EBD-6-1-1	N/A	Main steem bypas	1971	Repair	No	
	<del></del>								
		L.,	. <b>1</b>		.1	<u> </u>	l	لــــــــــــــــــــــــــــــــــــــ	
	Description of W	ork Removal of	3/8* in Length	. 1/66# widt	th and a 1/4# in i	enath.	1/32" width indica	ation	
	becompered of the		7.0	1 1/44 414		<u> </u>	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Tests Conducted:	Hydrostatic	Pneu	natic	Nominal (	Operatio	n Pressure	П	
		Other	Pressure	N/A	—— psi ⊺est⊺an	-	_N/A°F	_	
			r i 4994i 4	·// FI	poi (est las	~∙	r		
	NOTE: Simplements	ni chaste in for	m of lists st	b	laaviaaa may ba ya	ad ===	vided (1) size is	914. i.e. u	11
	MOIE: SOME FERRESTER	it Sileath ill ioi	M UI LIBLB. SE	etches. or c	11.98 (UND 1116A DE CR	aq, bro	AICHEO (I) SITE IS	QM III. X	



sheet 2 of 2

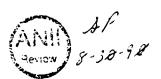
thickr	ess was verified by UT, minimum wall required .602"; as left .638".	
		•
	CERTIFICATE OF COMPLIANCE	
to t	We certify that the statements made in the report are correct and this repair repair or replacement	_ co
	Type Code Symbol Stamp None	
	Certificate of Authorization No. None Expiration Date	_
	Signed Sumler Shaupai Codes & Materials, TGL Date 8-289.  Owner or Owner's Designee, Tible	_,
	CERTIFICATE OF INSERVICE INSPECTION	
Insp	he undersigned, holding a valid commission issued by the Nationel Board of Boiler and Press actors and the State or Province of <u>Iowa</u> and employed by <u>Hartford Steam Boi</u> of <u>Hartford, Connecticut</u> have inspected the components de	ler
, an	Owner's Report during the period $2-2C-9a$ to $8-3a-9d$ distate that to the best of my knowledge and belief, the Owner has performed examinations and taken where described in the Owner's Report in accordance with the requirements of the ASME Code, Section	
conc Insp	y signing this certificate neither the Inspector nor his employer makes any warranty, expressed of erning the examinations and corrective measures described in this Owner's Report. Furthermore, neector nor his employer shall be liable in any manner for any personal injury or property damage or kind arising from or connected with this inspection.	ei th
_	Commissions NB 8829(I)(N) 941-IA Inapectors Signature Commissions NB 8829(I)(N) 941-IA National Board, State, Province, and En	dors

		**						
1.	Owner <u>Iowa Elect</u>	Date <u>August 27,1990</u>						
		Name	2/0/		ahaan 4 at	_	٠	
	P.U.BOX 351, Ce	dar Rapids, IA 5. Address			Sheet <u>1 of</u>	2	·	
2.	Plant <u>Duane Arno</u>	ld Energy Center			Unit1_			
		Nema	***					
	3277 DAEC Rd.	Palo, IA 52324				CMAR #A	02679 rganization P.O.M	io lob No
_								
3.	Work Performed b	Name		i	Type Code Symbol	Stamp	tampNone	
			•		Authorization No.	<del></del>	Nona	
	3277 DAEC Road				Expiration Date _		None	····
		Address						
4.	Identification o	f System <u>Main</u>	Steam Bypass	line (Class	2)	<del>.</del>	——————————————————————————————————————	
5.		nst. Code <u>ANSI B</u>	31.1	19 <u>67</u>	Edition,		_Addenda,	N/A Code
	Case (b)Applicable Ed	ition of Section	XI Utilized f	or Repairs	or Replacements 19	30 W81	class 2	
6.	Identification o	f Components Repa	mired or Repla	ced and Rep	lacement Components	S		
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repoired Replaced, or Replacement	ASME Code Stamped (Yes or No)
Weld MSE-CF006		Bechtel	spool # EBD-6-1-1	N/A	Main steam bypas	1971	Repair	No
				_				
,				-				
		L			·		<del>L </del>	·
7.	Description of W	ork <u>Removal of 1</u>	two 5/16" indi	cations on 1	the Main Steam Bype	ess line	12"-EBD-6	
8.	Tests Conducted:	Hydrostatic	Pneu	matic	Mominal C	peration	n Pressure	П
		Other	Pressure	N/A	psi Test Tam	P	_N/A°F	_
		لسا			<del></del>			
	in.,(2)information	on in items 1 thr	rough 6 on thi	s repart is	drawings may be use included on each :	ed, prov sheet, a	ided (1) size is nd (3) each sheet	8% in. x 11 is numbered an
	the number of sh	eets is recorded	at the top of	this form.				



	eld was repaired by grinding out indications. Inspected under same ISI number 90-281. Minimum wall thicknes
<u>v</u>	erified by UT, minimum wall required ,602"; as left ,628".
	CERTIFICATE OF COMPLIANCE
	We certify that the statements made in the report are correct and this repair confit to the rules of the ASME Code, Section XI.
	Type Code Symbol Stemp None
	Certificate of Authorization No. <u>None</u> Expiration Date
	Signed Survider Pharefair Codes & Materials, TGL Date 8-28-, 19 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 Ve Inspectors and the State or Province of and employed by Hartford Steam Boiler I8 of Hartford, Connecticut have inspected the components describe
	of Hartford, Connecticut have inspected the components describe to state that to the best of my knowledge and belief, the Owner has performed examinations and taken correct measures described in the 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 imple concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a los any kind arising from or connected with this inspection.
	Inspectors Signature National Board, State, Province, and Endorsem
	Date

	Owner <u>Iowa Electi</u>	<u>ric Light and Po</u> Name	ver		Date August	27, 1990			
	D O Boy 751 Co.	dos Bosido IA E	2/04		Sheet <u>1 of</u>	2			
	P.U.80X 331, Cec	Address	2400			٤			
	Plant <u>Duane Arnol</u>	d Fneray Center			Unit 1				
	reality State Arrior	Name							
	3277 DAEC Rd. 1	Palo, IA 52324				CMAR #A			
	Address					Repair 0	rganization P.O.N	o.,Job No	•
	Work Performed by				Type Code Symbol	Stamp	None		
		Name			Authorization No.		None		
						<b></b>			
	3277 DAEC Road	Palo, IA 52324			Expiration Date _		None		
-		Address							
	Identification of	f Systam <u>Main</u>	Steam Bypass	lina (Class	2)				
		nst. Code <u>ANSI 8</u>	51.1	19 <u>_67</u>	Edition,		Addenda,	N/A	_Cod
	Case (b)Applicable Edi	ition of Section	XI Utilized f	or Repairs	or Replacements 19	80 W81	class 2		
	Name of Component	Name of Manufacture	Manufacturer Serial No.	Nationsl Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)	
ld M	4SE-CF010	Bechtel	spool # EBO-6-1-1	N/A	Main steam bypas	1971	Repair	No	
				· · · · · · · · · · · · · · · · · · ·					
			- 44 - 15 - 15	10	A	34 FSS 4	,		
	Description of W	erk <u>Removal of</u>	a 3º indicatio	n on Mein S	team Bypass line 1	2"-EBD-6	<u> </u>		
	Description of W			n on Mein S			n Pressure		<del></del>
	·					Operatio			



Weld was repaired by grinding out indication		er 90-280. Minimum Wall thickne
verified by UT, minimum wall required .602":	; as left .638".	
		· · · · · · · · · · · · · · · · · · ·
	CERTIFICATE OF COMPLIANCE	
We certify that the statements made i	in the report are correct and this	s <u>repair</u> co
to the rules of the ASME Code, Section XI.	•	repair or replacement
The state and a state as an		
Type Code Symbol Stamp None		
Certificate of Authorization No	Hann	Eurinadian Bada
		Expiration Date
Signed Survidu Shaufar Owner or Owner's Designee, Ti	Codes & Materials TG	L Date 8-28_
Owner or Owner's Designee, Ti	itle	
CERT	TIFICATE OF INSERVICE INSPECTION	
I, the undersigned, holding a valid comma	mission issued by the National	Roard of Roiler and Pressure \
Inspectors and the State or Province of of Hartford, Connec	<u> Iона</u> and empt	loyed by Hartford Steam Boiler I
this Owner's Report during the period	8-13-30	inspected the components describ
, and state that to the best of my knowledge measures described in the Owner's Report i	e and belief, the Owner has perfor	rmed examinations and taken corre
		·
By signing this certificate neither the concerning the examinations and corrective	Inspector nor his employer makes	s any warranty, expressed or imp
inspector nor his employer shall be liable	in any manner for any personel i	n's Report. Furthermore, heithe njury or property damage or a lo
any kind arising from or connected with th	is inspection.	-
- Sunta Poulin	Commissions <u>NB 8829(I)</u>	)(N) 941-IA
Inspectors Signature	National Boa	ord, State, Province, and Endorse
Date 8.30 19.92		

	Owner <u>Iowa Elect</u>	ric Light and Por Name	wer		Date August	28,1990	. ,	
			2424			•		
	P.O.Box 351, Ce	<u>dar Rapids, IA 57</u> Address			Sheet 1 of	2		· · · · · · · · · · · · · · · · · · ·
	Plant <u>Duane Arno</u>	id Emoney Conton			linie 1			
	Ptant Duane Arno	Name			Unit			· · · · · · · · · · · · · · · · · · ·
	3277 DAEC Rd.	Palo. IA 52324				CMAR #0	91778	
	Address						Organization P.O.)	lo.,Job No.
	Work Performed b				Type Code Symbol	Stamp	None	
		Name	,		Authorization No.		None	
	3277 DAEC Roed				Expiration Date _		None	
		Address	•					
	Identification o	f System <u>RHR</u>	line 12"-GLE-5	(Class 2)		<del></del>		
	(a)Applicable Con Case EXTENSION				Edition,		Addenda,	N/A C
					or Replacements 19	80 W81	class 2	
							•	
	Identification o	f Components Rep	mired or Repla	ced and Repi	acement Component	8		1
		1						
		ļ.		National	1		Repaired	ASME Code
	Name of	Name of	Manufacturer Serial No.		Other Identification	Year	Replaced,	Stamped (Yes
	Component	Manufactur <del>e</del>	Serial No.	No.	Identification	Built	or Replacement	or No)
							·	
		ANCHOR					<del> </del>	
193	4	DARLING	UNKNOWN	N/A	12"-GLE-GB	1972	REPAIRED	YES
					ļ			
							[	
-		-	1		†			
	<del>.</del>				<u> </u>		1	
	<b></b>						• 4. • •	
	Description of W	ork <u>Grinding of</u>	eroded areas	OT VALVE DOC	ty, welding of dis	c and gu	lide rids.	<u>,</u>
	Tests Conducted:	Hydrostatic	Pneus	matic	Mominal (	<b>De</b> ratio	n Pressure	$\neg$
		,	U		<b>.</b>			u
						_		
		Other	Pressure	N/A	psi Test Tam	₽	N/A °F	
					psi Test Tam Trawings may be us			<b></b>



repair conformer conformer repair conformer co
repair conformed
repair confor repair or replacement
repair or replacement  Expiration Date
repair or replacement  Expiration Date
-
_ Date 9-6, 19 <u>9</u>
pard of Boiler and Pressure Vess yed by <u>Hartford Steem Boiler I&amp;I</u> aspected the components described to <u>9-11-90</u>
9-1/-90 ed examinationa and taken correction of the ASME Code, Section XI.
any warranty, expressed or implie s Repart. Furthermore, neither t jury or property damage or a loss
N) 941-IA d, State, Province, and Endorsemen

1.	Owner Iowa Elec	tric Light and Po	wer		Date August	27, 1990		
	P.O.Box 351, 0	Cedar Rapids, IA 5 Address			Sheet <u>1 of</u>	2		
2.	Plant Duane Arm	nold Energy Center			Unit1			
		Palo, IA 52324				PMAR #1	046776, P.O. \$342	67
_	Address					•	Organization P.O.	•
3.	Work Performed	by <u>Iowa Electric</u> Name		······································	Type Code Symbol Authorization No.		None	
	3277 DAEC Road	i Palo, IA 52324 Address					None	
4.	Identification	of System <u>Reci</u>		CLASS 1)				
5.	(a)Applicable C	Const. Code ANSI B	31.7	19 <u>_6<b>9</b></u>	Edition, 1971		Addenda, NONE	Code Case
6.	Identification	of Components Rep	aired or Repla	aced and Rep	lacement Component	8		
	Name of Component	Name of Manufacture	Manufecturer Serial No.	Nationsl Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
Snubber	Pin	Iowa Electric	** .	N/A	DCA-004-SS8-001	1987	Replaced	No
Snubber	Pin	Bergen- Paterson	P1165721	· N/A	DCA-004-SSB-001	1987	Replacement	No
7.		m 1 1/2" SA-564-T- Work <u>Replace snu</u>						
8. Pressure Test Tam		Other psi	Pneu	metic	Nominal (	<b>Ope</b> ratio	en Pressure	

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8% 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.



ISI inservice inspection report 90-205.		
C	ERTIFICATE OF COMPLIANCE	
We certify that the statements made in	the repart are correct and this	replacement conf
to the rules of the ASME Code, Section XI.	•	repair or replacement
Type Code Symbol Stamp <u>None</u>		
Certificata of Authorization No. <u>No</u>	ne	Expiration Date
signed Strude Shauf	, ^	0 10
Signed Survey Su		_ Date <u>8 - 28 -</u> , 19
omer of omer of pestigned, firet		
	ICATE OF INSERVICE INSPECTION	
I, the undersigned, holding a valid commis	ssion issued by the National Bo	ard of Boiler and Pressure Ve
Inspectors and the State or Province of	icut and employ	ed by <u>Martford Steam Boiler I&amp;</u> spected the components describe
this Owner's Report during the period, and state that to the best of my knowledge a	8-21-70 to	الراق والمركة والمحروب
massuros described in the Owner's Repart in	and betlet, the Owner has partorma accordance with the requirements	of the ASME Code, Section XI.
By signing this certificate neither the I		·
concerning the examinations and corrective m	easures described in this Owner's	s Report. Furthermore maither
Inspector nor his employer shall be liable in any kind arising from or connected with this	n any manner for any personal ini	ury or property damage or a los
1	'	
Inspectors Signature	Commissions NB 8829(I)()	I) 941-IA
	National Board	, State, Province, and Endorsem
inspector of a gradedic		

2. Plant  3277  3. Work  3277  4. Ident  5. (a)Ap  Case (b)Ap (c  *	77 DAEC Rd. Addrass Addrass Applicable Construction Filter replace	y Iowa Electric Name  Palo, IA 52324  Address f System Reci nst. Code ANSI Bi ition of Section on code of Replace d built to this	rc Pump '8' (C 31.7 XI Utilized fi	19 69 for Repairs	Unit 1 Type Code Symbol	PMAR #1 Repair Stamp_	None  None  None  None	56 No.,Job No.
3277  Work  3277  Ident  (a)Ap Case (b)Ap (c  t Ident	Addrass  R Performed by  TO DAEC Road F  Applicable Core  Applicable Edit  C) Construction  #Item replace  #Item replace	Name Palo, IA 52324  y Iowa Electric Name  Palo, IA 52324 Address f System Reci nst. Code ANSI 8: ition of Section on code of Replaced built to this	rc Pump '8' (0 31.7 XI Utilized formment ITEMSeconstruction	2LASS 1)  19 69 for Repairs tion III 19	Type Code Symbol Authorization No Expiration Date  Edition, NONE or Replacements 19 74 Edition,	PMAR #1 Repair Stamp_	046777, P.O. 1506 Organization P.O. None None None	No., Job No.
Ident (a)Ap Case (b)Ap (c t Ident	Address  R Performed by  TO DAEC Road F  Applicable Core  Applicable Edit  C) Construction  *Item replace  attification of	Palo, IA 52324  y Iowa Electric Name  Palo, IA 52324  Address  f System Reci  nst. Code ANSI 8: ition of Section on code of Replace do built to this	rc Pump '8' (0 31.7 XI Utilized formment ITEMSec construction	2LASS 1)  19 69  for Repairs tion III 19	Type Code Symbol Authorization No Expiration Date  Edition, NONE or Replacements 19 74 Edition,	Repair Stamp	None  None  None  None	No., Job No.
. Work  3277 . Ident . (a)Ap Case (b)Ap (c t . Ident	Address  R Performed by  TO DAEC Road F  Applicable Core  Applicable Edit  C) Construction  *Item replace  attification of	y Iowa Electric Name  Palo, IA 52324  Address f System Reci nst. Code ANSI Bi ition of Section on code of Replace d built to this	rc Pump '8' (0 31.7 XI Utilized formment ITEMSec construction	2LASS 1)  19 69  for Repairs tion III 19	Type Code Symbol Authorization No Expiration Date  Edition, NONE or Replacements 19 74 Edition,	Repair Stamp	None  None  None  None	No., Job No.
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. Ident . (a)Ap Case (b)Ap (c  i Ident	TO DAEC Road For the policable Corporation of applicable Edic () Construction of the polication of the	Name Palo, IA 52324 Address  f System Reci nst. Code ANSI 8 ition of Section on code of Replaced built to this	rc Pump '8' (0 31.7 XI Utilized f	19 69 for Repairs	Edition, NONE or Replacements 19 74 Edition,	280 W81	None  None  Addenda, NO	NE (
. (a)Ap Case (b)Ap (c ±	atification of applicable Cor pplicable Edi c)Constructio *Item replace atification of	Address  f System Recinnst. Code ANSI 8  ition of Section on code of Replaced built to this	rc Pump 181 (0 31.7 XI Utilized formment ITEMSeconstruction	19 69 for Repairs	Expiration Date  Edition, NONE  or Replacements 19 74 Edition,	280 w81	None	NE (
Ident (a)Ap Case (b)Ap (c ± Ident	atification of applicable Cor pplicable Edi c)Constructio *Item replace atification of	Address  f System Recinnst. Code ANSI 8  ition of Section on code of Replaced built to this	rc Pump 181 (0 31.7 XI Utilized formment ITEMSeconstruction	19 69 for Repairs	Edition, NONE or Replacements 19 74 Edition,	2 <u>80 w81</u> w76 Ac	Addenda,NOI	
(a)Ap Case (b)Ap (c #	applicable Cor applicable Edi co)Construction *Item replace atification of	f System <u>Reci</u> nst. Code ANSI Bition of Section on code of Replaced built to this	31.7  XI Utilized formattion	19 69 for Repairs	or Replacements 19 74 Edition,	9 <u>80 W81</u> W76 Ac	-	
Case (b)Ap (c ± I dent	upplicable Edi cpCionstructio *Item replace atification of	ition of Section on code of Replace od built to this	XI Utilized for the seconstruction	or Repairs tion III 19	or Replacements 19 74 Edition,	9 <u>80 W81</u> W76 Ac	-	
(b)Ap (c # I dent	pplicable Edi c)Constructio *Item replace stification of	on c <b>ode</b> of Replaced built to this	construction	<u>tion III</u> 19 code	74 Edition,_	W76_A	Idenda 1644-5 Code	Case*
	•							
		N <b>ame</b> of Manufacture	Manufacturer Serial No.	Nationsl Bosrd No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
echanical Sr		Pacific-						
		Scientific Pacific-	SN352	N/A	DCA-004-SSB-004	1977	Replaced	No
echanical Sr	Snubber	Scientific	SN101	N/A	DCA-004-SSB-004	1984	Replacement	No
								-
					<del> </del>			
			<u> </u>			<u></u>		
Descri	ription of Wo	rk <u>Replace snub</u>	ober for funct	ional test.				····
Tests	s Conducted:	Hydrostatic	Pneus	Metic	Nominal (	<b>Ope</b> ratio	n Pressure	
	C	Other 🔲	Pressure	N/A	psi Test Tam	ф	<u>N/A</u> °F	
					drawings may be us	•		



	ore. Vt-3/4 preser			·		
		CERT	IFICATE OF COMP	LIANCE		
	tify that the stat s of the ASME Code		r <b>epo</b> rt are cor	rect and this <u>r</u>	eplacement repair or replacement	c
Туре С	ode Symbol Stamp _	None				
Certif	icate of Authoriza	ition No. <u>None</u>			Expiration Da	ite
Signed	Sumuler Owner or Owner's	Shauge Designee, Title	Codes & M	aterials <u>, TGL</u> 0	8-30-	
		CERTIFIC	ATE OF INSERVICE	INSPECTION		
Inspectors of this Owner	and the State or P Ha s Report during th	rovince of	10wa t 7-28-90	and amployed have inspect	d of Boiler and Pre by <u>Hartford Steam E</u> ected the components examinations and take	descr
measures de	scribed in the Own	mer's Report in acc	cordance with th	e requirements of	f the ASME Code, Sect	ion XI
concerning Inspector n	the examinations a	and corrective mass	ures described ny manner for a	in this Owner's A	y warranty, expressed Report. Furthermore, y or property demage	, neith
Ins	spectors Signature	ester_	Commissions	NB 8829(I)(N) National Board,	941-IA State, Province, and	Endors
Ins	spectors Signature			National Board,	State, Province, and	Ende

•	Owner <u>lowa El</u>	<u>lectric Light and Po</u> Name	ower		Date <u>Septem</u>	ber 3,19	290	
	P.O.Box 351	Cedar Rapids, IA S			Sheet <u>1 of</u>	2		
	Plant Duane A	Arnold Energy Center Name	<u> </u>	\ <u></u>	Unit1	<del></del>		
,	3277 DAEC Ro	i. Palo, IA 52324 ess	·		DCP 14		o and including F Organization P.O.	
	Work Performe	ed by <u>lowa Electric</u> Name		<del></del>				
	3277 DAEC RO	oad Palo, IA 52324 Address	3	<del></del>	Expiration Date		None	
	Identificatio	on of System <u>RHR</u>	line 10" EBB-1	6 (class 2)			· · · · · · · · · · · · · · · · · · ·	
	(a)Applicable	Const. Code ANSI B	31.7	19 <u>69</u>	_ Edition, <u>1971</u>		Addenda, NONE	Code
	(b)Applicable				•			
				ced and Rep	lacement Component	s		
		n of Components Rep		ced and Rep	lacement Component	s		
)				National Board No.	Other	Year Built	Repairad Replacad, or Replacement	ASME Code Stamped (Yes or No)
)	Identificatio	n of Components Rep	maired or Repla	National Board	Other	Year	Replaced,	Code Stamped (Yes
O" Pip	Identificatio  Name of Component	Name of Manufacture  Bechtel  Anchor Valve	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replacad, or Replacement	Code Stamped (Yes or No)
O" Pip	Name of Component	Name of Manufacture  Bechtel  Anchor Valve Bergen- Paterson	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
O" Pip	Name of Component	Name of Manufacture  Bechtel  Anchor Valve Bergen-	Manufacturer Serial No. EBB-16-1	National Board No. N/A	Other Identification 10#-EBB-16 MO 2298	Year Built 1971 1971	Replaced, or Replacement Replaced	Code Stamped (Yes or No) No
0" Pipe 0" val	Name of Component	Name of Manufacture  Bechtel Anchor Valve Bergen- Paterson Bergen-	Manufacturer Serial No. EBB-16-1 10"EBB-GT	National Board No. N/A N/A	Other Identification 10"-EBB-16 MO 2298 EBB-16-SS-231	Year Built 1971 1971 1982	Replaced, or Replacement  Replaced  Replaced  Replaced	Code Stamped (Yes or No)  No Yes
O" Pip O" val nubber anger	Name of Component	Name of Manufacture  Bechtel Anchor Valve Bergen- Paterson Bergen- Paterson	Manufacturer Serial No. EBB-16-1 10"EBB-GT DA10	National Board No. N/A N/A N/A	Other Identification 10"-EBB-16 MO 2298 EBB-16-SS-231 EBB-16-H-17	Year Built 1971 1971 1982 1973	Replaced, or Replacement  Replaced  Replaced  Replaced  Replaced	Code Stamped (Yes or No)  No Yes No

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8% 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.

Nominal Operation Pressure

min. 60

Test Temp.\_

Pneumatic

469

Pressure\_



Other

CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this repair or replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None Expiration Date  Signed 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 Pressu Inspectors and the State or Province of Iowa and amployed by Hartford Steam Boil of Hartford, Connecticut have inspected the components destribed in the Owner's Report during the period A state that to the best of my knowledge and belief, the Owner has performed examinations and taken or measures described in the Owner's Report in accordence with the requirements of the ASME Code, Section By signing this certificate neither the Inspector nor his employer makes any warranty, expressed of concerning the examinations and corrective measures described in this Owner's Report. Furthermore, no Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA  National Board, State, Province, and English and Connections and State, Province, and English and Connections and Connected with this inspection.		onstruction code. VT-2 performed	under procedure GMP-Test-0	31 and report # 90-358.
We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Codes & Materials, TGL Date  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Inservice Inspection  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressur and and amployed by Hartford Steam Bol of Hartford, Connecticut have inspected the components destribed oner's Report during the period April Noner's Report and Steam Bol of the Owner's Report on the Destroy of the ASME Code, Section By signing this certificate neither the Inspector nor his employer makes any warranty, expressed concerning the examinations and corrective measures described in this Owner's Report. Furthermore, in Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(1)(N) 941-1A				
Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed 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 Pressus Inspectors and the State or Province of Iowa and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components destricted this Owner's Report during the period and state that to the best of my knowledge and belief, the Owner has performed examinations and taken of measures described in the Owner's Report in accordence with the requirements of the ASME Code, Section By signing this certificate neither the Inspector nor his employer makes any warranty, expressed on Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(1)(N) 941-1A		CERT	IFICATE OF COMPLIANCE	
Certificate of Authorization No. None Expiration Date  Signed 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 Pressur Inspectors and the State or Province of Iowa and amployed by Hartford Steam Boil of Hartford, Connecticut have inspected the components destribed in the best of my knowledge and belief, the Owner has performed examinations and taken or measures described in the Owner's Report in accordence with the requirements of the ASME Code, Section Concerning the examinations and corrective measures described in this Owner's Report. Furthermore, no Inspector nor his employer makes any warranty, expressed on concerning the examinations and corrective measures described in this Owner's Report. Furthermore, no Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Admit Alica Accounts Andrew Commissions NB 8829(1)(N) 941-1A			report are correct and thi	s <u>replacement</u> repair or replacement
Certificate of Authorization No. None Expiration Date  Signed Codes & Materials, TGL Date  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 Pressu Inspectors and the State or Province of Iowa and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components designed to Inspector of this Owner's Report during the period Town to Inspector of the ASME Code, Section By signing this certificate neither the Inspector nor his employer makes any warranty, expressed of concerning the examinations and corrective measures described in this Owner's Report. Furthermore, not inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	to the rates of	the Marie Good, Good on Mile		, .
Codes & Materials, TGL Date  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressuring Inspectors and the State or Province of Iowa and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components destribed in the Dwner's Report during the period Inspector have inspected the components of and state that to the best of my knowledge and belief, the Owner has performed examinations and taken of measures described in the Owner's Report in accordance with the requirements of the ASME Code, Section By signing this certificate neither the Inspector nor his employer makes any warranty, expressed of concerning the examinations and corrective measures described in this Owner's Report. Furthermore, no Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	Type Code	Symbol Stamp <u>None</u>		
Certificate Of INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressur Inspectors and the State or Province of Iowa and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components destroyed, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken of maasures described in the Owner's Report in accordence with the requirements of the ASME Code, Section By signing this certificate neither the Inspector nor his employer makes any warranty, expressed of concerning the examinations and corrective measures described in this Owner's Report. Furthermore, not inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(1)(N) 941-1A	Certificat	e of Authorization NoNone_		Expiration Date
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressur Inspectors and the State or Province of Iowa and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components destribed where its Report during the period To				. , , 7 -
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressur Inspectors and the State or Province of IOWA and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components destribed of the period to	Signed	Y to bearing	Codes & Materials, TO	L Date
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressurinspectors and the State or Province of and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components destribed in the best of my knowledge and belief, the Owner has performed examinations and taken of maasures described in the Owner's Report in accordance with the requirements of the ASME Code, Section By signing this certificate neither the Inspector nor his employer makes any warranty, expressed of concerning the examinations and corrective measures described in this Owner's Report. Furthermore, no Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.	ON.	ner or Owner's Designee, little	-	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components destribed in the best of my knowledge and belief, the Owner has performed examinations and taken of measures described in the Owner's Report in accordence with the requirements of the ASME Code, Section By signing this certificate neither the Inspector nor his employer makes any warranty, expressed of concerning the examinations and corrective measures described in this Owner's Report. Furthermore, no Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  **Commissions NB 8829(1)(N) 941-IA**				
Inspectors and the State or Province of Iowa and amployed by Hartford Steam Boil of Hartford, Connecticut have inspected the components destribed to IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		CERTIFICAT	TE OF INSERVICE INSPECTION	
Inspectors and the State or Province of Iowa and amployed by Hartford Steam Boil of Hartford, Connecticut have inspected the components destribed in the Dwner's Report during the period to IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	1 the undersi	oned holding a valid commission	n issued by the National	Board of Boiler and Pressu
this Owner's Report during the period to //-/		the State or Province of	ious and amo	loved by Hartford Steam Boil
masures described in the Owner's Report in accordence with the requirements of the ASME Code, Section  By signing this certificate neither the Inspector nor his employer makes any warranty, expressed of concerning the examinations and corrective measures described in this Owner's Report. Furthermore, no Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	Inspectors and		have	inspected the components des
By signing this certificate neither the Inspector nor his employer makes any warranty, expressed of concerning the examinations and corrective measures described in this Owner's Report. Furthermore, no Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(1)(N) 941-IA	Inspectors and	Hartford, Connecticut		
concerning the examinations and corrective measures described in this Owner's Report. Furthermore, no Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	Inspectors and of	port during the period	7 22 54	rmed examinations and taken of
concerning the examinations and corrective measures described in this Owner's Report. Furthermore, no Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	Inspectors and of this Owner's Re and state that	port during the period	ファップラ belief, the Owner has perfo	rmed examinations and taken o
Inspector nor his employer shall be liable in any manner for any personal injury or property damage or any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	Inspectors and of this Owner's Re, and state that measures descri	port during the period t to the best of my knowledge and bed in the Owner's Report in acco	belief, the Owner has perfo ordence with the requiremen	ormed examinations and taken on the ASME Code, Section
Acath (2016) Commissions NB 8829(1)(N) 941-1A	Inspectors and of this Owner's Re, and state that measures describly signing to concerning the	port during the period t to the best of my knowledge and bed in the Owner's Report in acco his certificate neither the Inspe examinations and corrective measu	belief, the Owner has perfo ordence with the requirement ector nor his employer make ures described in this Owner	ormed examinations and taken on the of the ASME Code, Section as any warranty, expressed or ar's Report. Furthermore, no
Inspectors Signature Commissions NB 8829(I)(N) 941-IA  National Board, State, Province, and Enc	Inspectors and of this Owner's Re, and state that masures describly signing to concerning the Inspector nor h	port during the period to the best of my knowledge and bed in the Owner's Report in according to the Inspection of the Inspective measurements and corrective measurements and corrective measurements and corrective measurements and corrective measurements.	belief, the Owner has perfo ordence with the requirement ector nor his employer make ures described in this Owner my manner for any personal	ormed examinations and taken on the of the ASME Code, Section as any warranty, expressed or ar's Report. Furthermore, no
Inspectors Signature National Board, State, Province, and End	Inspectors and of this Owner's Re, and state than measures descri By signing t concerning the Inspector nor h any kind arisin	port during the period to the best of my knowledge and bed in the Owner's Report in according to the Inspectation of the Inspe	belief, the Owner has perfo ordence with the requirement ector nor his employer make ures described in this Owner my manner for any personal spection.	inter examinations and taken on this of the ASME Code, Section as any warranty, expressed or ar's Report. Furthermore, no injury or property damage or
	Inspectors and of this Owner's Re, and state than measures descri  By signing t concerning the Inspector nor h any kind arisin	port during the period to the best of my knowledge and bed in the Owner's Report in according to the Country Report in according to the Country Report in according to the Country Report in according to the Country Report in an according to the Country Report in an according to the Country Report in an according to the Country Report in an according to the Country Report in an according to the Country Report in an according to the Country Report in according to the Co	belief, the Owner has performed with the requirement ector nor his employer make ures described in this Owner may manner for any personal spection.  Commissions NB 8829()	ints of the ASME Code, Section as any warranty, expressed or arrive Report. Furthermore, no injury or property damage or
	Inspectors and  of this Owner's Re, and state than measures descri  By signing to concerning the Inspector nor hany kind arisin	port during the period to the best of my knowledge and bed in the Owner's Report in according to the Country Report in according to the Country Report in according to the Country Report in according to the Country Report in an according to the Country Report in an according to the Country Report in an according to the Country Report in an according to the Country Report in an according to the Country Report in an according to the Country Report in according to the Co	belief, the Owner has performed with the requirement ector nor his employer make ures described in this Owner may manner for any personal spection.  Commissions NB 8829()	ints of the ASME Code, Section as any warranty, expressed or er's Report. Furthermore, no injury or property damage or

	Ouman Java Fi	locanio licha and s			D		1000		
7.	Owner towa El	lectric Light and Po Name	wer		Date <u>Septem</u>	mber 3 ,	1990		
	P.O.Box 351	<u>, Cedar Rapids, IA S</u> Address		<del></del>	Sheet <u>1 of</u>	2			
2.	Plant <u>Duane #</u>	Arnold Energy Center Name			Unit 1			····	
	3277 DAEC Ro	d. Palo, IA 52324			DCP 14	99 un to	and including FC	N 1 DCN O	
	Addre					Repair	Organization P.O.	No.,Job No	5.
<b>.</b>	Work Performe	ed by <u>lowa Electric</u> Name			Type Code Symbol	Stamp_	None		<del></del>
		-			Authorization No	•	None		
	3277 DAEC RO	pad Palo, IA 52324 Address	-		Expiration Date		None	-	
•	Identificatio	on of System <u>HPCI</u>	line 10" E88-	14 (class 2)	)				<u></u>
•	(a)Applicable	Const. Code ANSI B	31.7	19 <u>69</u>	Edition, 1971		Addenda, NONE	с	ode Case
	(b)Applicable	Edition of Section	XI Utilized f	or Repairs o	or Replacements 19	280 W81		-	
	Name of Component	N <b>ame</b> of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repairad Replaced, or Replacemont	ASME Code Stamped (Yes	
								or No)	
10" Pi	pe(tee)	Bechtel Bergen-	E88-16-1	N/A	10"-EBB-14	1971	Replaced	No	
Hanger	·	Patterson	N/A	N/A	EBB-14-SR-17	1973	Replaced	No	·
10" Pi	pe(elbow)	Tioga Pipe Co.	HT7814A	N/A	10"-EBB-14	1990	Replacement	No	
leld H	PC-CF55R	Iowa Electric	N/A	N/A	FW-3A	1990	Replacement	No	
ield H	PC-CF57R	Iowa Electric	N/A	N/A	FW-1A	1990	Replacement	No	
ield H	PC-CF56R	Iowa Electric	N/A	N/A	FW-2A	1990	Replacement	No	
	" bolt " bolt Description of	Cardinal Cardinal f Work <u>Removed cros</u>	A2213-A2 HT D66732 is tie line 10	N/A N/A '-EBB-16, Re	EBB-14-H8 EBB-14-H8 place with Elbow	1986 1988 (HPCI si	Replacement Replacement de)	No No	
	Tests Conducta	ad: Hydrostatic	x Pneum	natic [	Nominal C	peration	n Pressure		
		Other	Pressure	1430	— psi TestTem	p	<u>75       °</u> °F	_	
	NOTE: Complete	ambal abasis s							
	in (2) informa	ental sheets in for	m of lists, s	ketches, or	drawings may be	usad, p	provi <b>ded</b> (1) size	is 8½ ir	n. x 11

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8% 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.

9.

ollowing NDE: p	reservice UT for weld H	PC-CF55R, ISI	Report #90-335	,#90-336;preserv	vice MT ISI Report #90-337
reservice UT fo	r weld HPC-CF56R #90-33	8, #90-339;pr	eservice MT #	0-340. Preservio	ce UT for weld HPC-CF57R 9
0-333;Preservic	e MT #90-334. RT of eac	h weld per co	onstruction co	de. VT-2 perform	ed under procedure STP46G0
	<u></u>	CERTIFIC	CATE OF COMPLI	ANCE	
	y that the statements ma f the ASME Code, Section		oort are corre	ct a <b>nd</b> this <u>re</u> re	placement compair or replacement
Type Code	Symbol Stamp <u>None</u>				
Certifica	te of Authorization No.	None			Expiration Date
Signed	ener or Owner's Designed	j cui	Codes & Mat	<u>erials, TGL</u> Da	ate
		CERTIFICATE (	OF INSERVICE I	NSPECTION	
Inspectors and of this Owner's Ro, and state tha	the State or Province of Hartford, Corport during the period t to the best of my know	onnecticut	ief, the Owner	and amployed b have inspec to has performed ex	of Boiler and Pressure of Martford Steam Boiler cted the components described with the components and taken corrected ASME Code, Section XI.
concerning the Inspector nor I	examinations and corrections amployer shall be ling from or conflected with	ctive measures able in any m th this inspec	s described in manner for any ction.	this Owner's Re personal injury	warranty, expressed or im eport. Furthermore, neith or property damage or a lo
Inspec	tors Signature		Commissions Na	NB 8829(I)(N) oational Board, St	941-IA tate, Province, and Endorse
		2-			

<sup>\*\*</sup>Preservice VT-3/4 on EBD-14-H8 was performed under ISI No. 90-012.

	Owner <u>lowa Elec</u>	tric Light and Po Name	Her		Date August	27,1990		
	P.O.Box 351, C	edar Rapids, IA 5. Address			Sheet <u>1 of</u>	2		
•	Plant Duane Arn	old Energy Center Name	<u> </u>		Unit1			
	3277 DAEC Rd. Address	Palo, IA 52324				PMAR #1	046774, P.O. \$342 Organization P.O.)	67 10.,Job No.
i <b>.</b>	Work Performed				Type Code Symbol	Stamp_	None	
٠		Name			Authorization No.	·	None	
	3277 DAEC Road	Palo, IA 52324 Address			Expiration Date _		None	
	Identification	of System <u>Reci</u>	rc Pump 'A' (C	LASS 1)				
i.	(a)Applicable Co	onst. Code ANSI B	31.7	19 69	_ Edition, <u>1971</u>		Addenda, NONE	Code C
	(b)Applicable E	dition of Section	XI Utilized f	or Repairs (	or Replacements 19	80 W81		,
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
	- · · · · · · · · · · · · · · · · · · ·	<u> </u>	1		·			G. 110)
Snubber	Pin	Iowa Electric		N/A	DCA-004-SSA-001	1987	Replaced	No
<u>.</u>		Iowa Electric Bergen- Paterson	P1165721	N/A	DCA-004-SSA-001	1987	Replaced Replacement	
Snubber		Bergen-	P1165721					No
<u>.</u>		Bergen-	P1165721					No
Snubber	Pin Fabricated from	Bergen-	640 round bar	N/A stock				No

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ in. x 11 in.,(2)information in items 1 through 6 on this repart is included on each sheet, and (3) each sheet is numbered and the number of sheets is recormed at the top of this form.



				<del></del>	
	•	CERTIFI	CATE OF COMPLIANC	Œ	
	rtify that the statements es of the ASME Code, Sect		port are correct		acement ir or r <mark>eplacement</mark>
Type	Code Symbol Stamp <u>Nor</u>	ne	<del> </del>		
Certi <sup>.</sup>	ficate of Authorization A	No. None			Expiration Date
Signed	Survider Sha Owner or Owner's Design		Codes & Materi	ials, TGL Date	8 - 28 -
		CERTIFICATE	OF INSERVICE INSE	ECTION	
I, the und Inspectors of	dersigned, holding a val and the State or Provinc Hartford	ce of	I owa	and employed by	f Boiler and Pressu <u>Hartford Steam Boil</u> d the components des
this Owner, and state	's Report during the peri e that to the best of my k escribed in the Owner's R	iod knowledge and bal	ief, the Owner ha	toto	<u> ダースタータル</u> ninations and taken d
concerning Inspector	ing this certificate neit the examinations and cor nor his employer shall ba rising from or connected	rrective measure a liable in any m	s described in the manner for any pe	ni <b>s Owne</b> r's Repo	rt. Furthermore, ne
	cotto Preste	<u>~~</u>	CommissionsNE	1 8829(1)(N) 94	1-1A
In	spectors Signature		Hati	onal Board, Stat	e, Provi <b>nce</b> , and End

		edar Rapids, IA 5 Address	2406		Sheet 1 of	•		
	Plant Duane Arno				. sneet <u>1 01</u>	۷		
		old Energy Center			Unit <u>1</u>			
		Name						
	3277 DAEC Rd. Address	Palo, IA 52324	· · · · · · · · · · · · · · · · · · ·	-	· <del></del>		<u>96050</u> Organization P.O.	No. Job No.
	Work Performed b	w lowa Flectric			Type Code Symbol	•		,
		Name						
					Authorization No	' <del></del> -	None	<del></del>
	3277 DAEC Road	Palo, IA 52324			Expiration Date		None	
		Address						
	Identification o	f System <u>RMR</u>	inject inboard	i, line 20"-	DLA-6 (class 1)	<del></del>	<del></del> _	
	(a)Apolicable Co	nst Code ASME D	IMP & VALVE CO	ne 10 68	Edition,		å elela mela	11.74
	Case							N/AC
	(b)Applicable Ed	ition of Section	XI Utilized f	or Repairs	or Replacements 19	80 W81	class 1	
	Identification o	f Components Rep	aired or Repla	ced and Rep	lacement Component	s	•	
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacament	ASME Code Stamped (Yes or No)
		ANCHOR						
- 1905		Valve Co.	IH-034	N/A	20"-DLA-GT	1972	REPAIRED	YES
	·					,		
<del></del>	-		<u> </u>	<del></del>			<u> </u>	
1	Description of Wo	ork Machining of	disc tee slo	t and quide	saddle, then seal	عماما		
	, p		4,00 (00 3(0	c and guide	sauce, then seat	weld of	Dack Seat to bon	net.
•	Tests Conducted:	Hydrostatic	Pneum	natic	Nominal C	peration	n Pressure [	x
		Other	Pressure	1026	psi TestTem		206 °F	ت
			· · · · · · · · · · · · · · · · · · ·		poi lest lem	P	200	

12 NIII 18 129 19 R

	Applicable Manufacturer'	s Data Reports to be attached	l
required	machining to correct misalignment. In add	ition, because of stem hole b	ushing wear a replacement was
required	which was seal welded to bonnet.	-	
	CERTI	FICATE OF COMPLIANCE	
	e certify that the statements made in the records of the ASME Code, Section XI.	report are correct and this _	repair or replacement con
T	ype Code Symbol Stamp None		
c	ertificate of Authorization No. <u>None</u>		Expiration Date
s	igned Surulu Shaulan Owner or Owner's Designee, Title	Codes & Materials, TGL	Date
:	CERTIFICATE	E OF INSERVICE INSPECTION	
I, the	e undersigned, holding a valid commission tors and the State or Province of of	Iowa and employe	rd of Boiler and Pressure V d by <u>Hartford Steam Boiler I</u> pected the components describ
, and	wher's Report during the period	to velief, the Owner has performed	<u> </u>
concer Inspec	signing this certificate neither the Inspec ning the examinations and corrective measur tor nor his employer shall be liable in any nd arising from or connected with this insp	res described in this Owner's manner for any personal inju pection.	Report. Furthermore, neitheury or property damage or a lo
	Inspectors Signature	Commissions <u>NB 8829(I)(N)</u> National Board,	) 941-IA State, Province, and Endorse
Data	ON 29 19 80		

	Owner Iowa Elec	tric Light and Po	wer		Date August	30,1990	)	
_	D O Bov 751 O	Name Cedar Rapids, IA 5	2404		Shoot 1 of	2		
	F.U.BUX 331, C	<u>Address</u> Address			SHEET 1 01	<u> </u>	· · · · · · · · · · · · · · · · · · ·	
	Plant <u>Duane Arn</u>	nold Energy Center			Unit <u>1</u>			
		Name						
	3277 DAEC Rd.	Palo, IA 52324			-			
		-				•	Organization P.O.	·
	WORK Pertormed	by <u>lowa Eloctric</u> Name			Type Code Symbol	Stamp	None	
					Authorization No	•	Hone	
	3277 DAEC Road	Palo, IA 52324			Expiration Date		Hone	
	· ·	Address			cxpiration bate		none	
	Identification	of SystemRCIC	STEAM SUPPLY	(Class 1)				
						,		
	(a)Applicable C	onst. Code ANSI B	31.7	19 <u>6<b>9</b></u>	Edition, <u>NONE</u>	<del></del>	Addenda ,NOI	NECo
	(b)Applicable E	dition of Section	XI Utilized f	or Repairs	or Replacements 19	80 U81	•	
	(c)Construct	ion code of Replac	ement ITEMSec	tion III 19	74 Edition,	W76 Ac	 Idenda 1644-5 Code	Case*
	*Item replac	ced built to this	construction	code				
	Identification	of Components Rep	aired or Repla	ced and Rep	lacement Component	:s		
				Hational		ł	Repaired	ASME Code
	Hame of	Name of	Manufacturer	Board	Other	Year	Replaced,	Stamped
	Component	Manufacture	Serial No.	Ho.	Identification	Built	or Replacement	(Yes
				,		·		or No)
	·· <u> </u>							
<b></b>	ical Saubbaa	Pacific-	0					<del>                                     </del>
nan	cal Snubber	Scientific Pacific-	SN604	H/A	DBA-004-SS-036	1977	Replaced	No
hani	cal Snubber	Scientific	SN 1904	H/A	DBA-004-SS-036	1977	Replacement	No
		-					<del>. </del>	<del></del>
	Description of N	Hork <u>Replace snut</u>	ber for funct	ional test.				
	Tests Conducted:	: Hydrostatic	Pneus	etic	Nominst (	Operatio	n Pressure	
		Other	Pressure	N/A	psi Test Tem	p	N/A°F	-
		_	:			·	- <del></del>	
	NOTE: Supplement	tal sheets in form	of lists, sk	etches. or d	rawings may be us	ed. prov	ided (1) size in	RVL in U 11
		ion in items 1 thr neets is rocorded	ough o on this	e recorr is	included on each	sheet, a	nd (3) each sheet	is numbered
	THE HOUSEL OF SL	THE CALL S COCOLGED	at the too of	TRIS FORM				

ANII) 9-4-90

	CERTIFICATE OF COMPLIANCE
to	We certify that the statements made in the report are correct and this <u>replacement</u> of the rules of the ASME Code, Section XI.
	Type Code Symbol Stamp None
	Certificate of Authorization No. <u>None</u> Expiration Date
	Signed Struder Shaufan Codes & Materials, TGL Date 8-30-
	CERTIFICATE OF INSERVICE INSPECTION
Ir	, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure nspectors and the State or Province of <u>Iowa</u> and employed by <u>Hartford Steam Boiler</u> of <u>Hartford, Connecticut</u> have inspected the components descr
,	his Owner's Report during the period 5-3/-92 to 9-4/-92 and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corresponded in the Owner's Report in accordance with the requirements of the ASME Code, Section XI
Ir	By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or in concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith inspector nor his employer shall be liable in any manner for any personal injury or property damage or a manner for any personal inju
_	Acotto Signature Commissiona NB 8829(I)(N) 941-IA  National Board, State, Province, and Endors

	Owner Iowa Ele	ctric Light and Po	ower		Date <u>August</u>	29,1990		
		Name						
	D O Box 351	Cadar Danide IA	52404		Sheet 1 of	2		
	P.U.BUX 331,	Addres			Silect 1 OI		·	<del> </del>
			_					-
	Plant Duane Ar	nold Energy Cente	<u>r</u>		Unit <u>1</u>			
		Name						
	7277 DAEC D4	0010 14 52726				CMAD #A	01862 CSP A	
	Addres	<u>Palo, IA 52324</u>		<del></del>		Repoir	Organization P.O.	lo. Job No.
	, , , , , , , , , , , , , , , , , , ,						<b>, , , .</b>	
	Work Performed	by Iowa Electric			Type Code Symbol	Stamp	None	
		Name			Aughanisanian No		None	
					Authorization No.	·———	None	·
		•						
	3277 DAEC Roe	d Palo, IA 52324	• .		Expiration Date		None	
		Addres	s					
	1		lina 2/#-WE-7	/ /Class 2\				
	Identification	of Systam RHR	tine 24"-MLE-/	(Class 2)				<del></del>
			-					
	(a)Applicable	Const. Code ASME	PUMP & VALVE CO	DE 19 <u>68</u>	Edition,		Addenda,	N/A C
	Case EXTENSI	ON OF CONTAINMENT	ASME CODE CASE	1427				
	(b)Applicable	Edition of Section	n XI Utilized f	or Repoirs	or Replacements 19	<u>80 W81</u>	class 2	
	Idantification	of Components Day	noised or Benla	cad and Dan	lacement Component	•		
	ruent i i cat i un	or components ke	polied of kepta	iced and kep	(acelleric colliporieric	3		
	: : : : : : : : : : : : : : : : : : : :							
		1						ASME
	۱		1	National			Repaired	Code
7	Name of Component	Name of Manufacture	Manufacturer Serial No.	Board No.	Other Identification	Year Built	Replaced, or Replacement	Stamped (Yes
	Component	na loi acture	Serrat No.	NO.	ruent in cation	Built	or representation	or No)
					<u> </u>		<del> </del>	<del> </del>
100	<b></b>	ANCHOR	I IMPAGEM	M / A	2/4 44 5 67	1074	05041050	V=0
198	D7	Valve	UNKNOWN	N/A	24"-HLE-GT	1971	REPAIRED	YES
rut	s	Bolt	HTCODE 213	~ N/A	MQ 1989	1979	Replacement	NO
_				-			1	
							ļ	<u> </u>
_							<u></u>	
	Description of	Work <u>Welding of</u>	guide ribs Als	o repleced	3 studs.			
	Tests Conducte	d: Hydroatatic	Press	metic	Momine!	nerstic	n Pressure	$\Box$
		,				operation.	at in eggel e	
		Other 🗍	Pressure	N/A	psi Test Tan	Ф	N/A °F	
		لــا			<del></del>	-		
					•			
	NOTE: Supplement	ntal sh <b>ee</b> ts in fo	rm of lists, sk	etches, or o	drawings may be us included on each	ed, pro	vided (1) size is	8% in. x 11
	1110 1 ( 2 ) 1111 01 1110	CION III I CENNE I C	nough or on thi	2 : AMOLE 12	included on each	sne€t, ∂	and (3) each sheet	: IS numbere

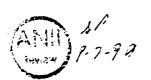
the number of sheets is recorded at the top of this form.



A weld bui	ildup for proper alignment was perforded on the guide ribs. The	wald areas were machined to proper
dimensions	s. Replacement of studs ware of A193 grade B7 material (P.O. F16	625)
•		
	CERTIFICATE OF COMPLIANCE	
Ua .	certify that the statements made in the report are correct and t	this repair cor
	rules of the ASME Code, Section XI.	ropeir or roplacement
Typ	pe Code Symbol Stamp <u>None</u>	
Cer	rtificate of Authorization No. <u>None</u>	Expiration Date
	0,00	<b>6</b> - 3 1
Sig	gned Surndu Shoufar Codes & Materials.  Owner or Owner's Designee. Title	TGL Date 8-31-
····	owner or owner a besignee, includ	
	CERTIFICATE OF INSERVICE INSPECTIO	ON .
I, the	undersigned, holding a valid commission issued by the Nationa	al Board of Boiler and Pressure \
Inspecto	ors and the State or Province of <u>Iowa</u> and e of <u>Hartford, Connecticut</u> ha	<pre>mployed by <u>Hartford Steam Boiler 1</u> ve inspected the components describ</pre>
this Own	ner's Report during the period ジーゴムー データ	to
	tate thet to the best of my knowledge and belief, the Owner has per s described in the Owner's Report in accordance with the requirem	
	igning this certificate neither the Inspector nor his employer m	
concerni	ing the examinations and corrective measures described in this On or nor his employer shall be liable in any manner for any persons	wher's Report. Furthermore, heith
any kind	d arising from or connected with this inspection.	t injury or property damage or a to
	Sent Sizella Commissions NB 8825	9(1)(N) 941-1A
-	Inspectors Signature National	Board, State, Province, and Endorse
	<u>9-7</u> 19 <i>90</i>	

PLONE STATE CENTER ACCIONNO NAME OF COMPONENT REPAIR OF COMPONENT		Owner <u>lowa Ele</u>	ectric Light and Po Name	<u>wer</u>	<del></del>	Date <u>August</u>	30,1990	)	
Name  3277 DAEC Rd. Palo, IA 52324  Address  Work Performed by Iowa Electric Type Code Symbol Stamp None  Authorization No. None  3277 DAEC Road Palo, IA 52324  Address  Identification of System HPCI Line 1" EBB-14 (class 2)  (a)Applicable Const. Code ANSI B31.7  Identification of Section XI Utilized for Repairs or Replacements 1980 W81 CLASS 2  Identification of Components Ropeired or Replaced and Replacement Components  Name of Manufacturer Serial No. No. Identification Replaced, or Replaced, or Replaced, or Replaced (Yes or No)  " 6000# Sockolet Jinknown N/A N/A 1"-EB8-14 1971 Replaced No. Replaced No. Incomposed Replacement No. Incomposed Replacement No. Incomposed Replacement No. Incomposed Replacement No. Incomposed Replacement No. Incomposed Replaced No. Incomposed Replacement No. Incom		P.O.Box 351,				Sheet 1 of	2		
Name of Components Ropeired or Replaced and Replacement Components   Name of Manufacturer Manufacturer Manufacturer Manufacturer Manufacturer Serial No.   No.		Plant <u>Duane Ar</u>				Unit 1			
Work Performed by Iowa Electric Type Code Symbol Stamp None    Mame				- 1 - 5 - 10 day - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1				•	No. Job No.
Section   Sect		Work Performed			· · · · · · · · · · · · · · · · · · ·		•	_	
Identification of System HPCI line 1" EBB-14 (class 2)  (a)Applicable Const. Code ANSI 831.7 19_69 Edition, Addenda, Code Code Code ANSI 831.7 19_69 Edition, Addenda, Code Code Code Code ANSI 831.7 19_69 Edition, Addenda, Code Code Code Code Code Code Code Code						Authorization No.	•	None	
(a)Applicable Const. Code ANSI 831.7 19_69 Edition, Addenda, Code Code Code Code Code Code Code Code		3277 DAEC Roa			<del></del>	Expiration Date		None	<del></del>
Mame of Component   Name of Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   No.   Manufacturer   Serial No.   Manufacturer   Serial No.   Manufacturer   Serial No.   Manufacturer   Serial No.   Manufacturer   Serial No.   Manufacturer   Serial No.   Manufacturer   Serial No.   Manufacturer   Serial No.   Manufacturer   Serial No.   Manufacturer   Manufacturer   Serial No.   Manufacturer   Manufacturer   Serial No.   Manufacturer   Manufacturer   Serial No.   Manufacturer   Manufacturer   Serial No.   Manufacturer   Manufacturer   Serial No.   Manufacturer   Manufacturer   Manufacturer   Serial No.   Manufacturer								· · · · · · · · · · · · · · · · · · ·	
Name of Component Name of Manufacturer Serial No.  No.  No.  No.  No.  No.  No.  No.		(a)Applicable	Const. Code <u>ANSI B</u>	31.7	19 <u>69</u>	_ Edition,		Addenda,	Code C
X 1 1/2" 6000#   Ckolet   Energy Steel   HT# Z-295   N/A   1990   Replacement   No   Sch 160   (Remaved)   Replaced   No   1/2" Sch 160   Chicago   Tube & Iron   HT# 282792   N/A   1987   Replacement   No   1/2" 600#   Hub Inc.   HT# 194SNF   N/A   1990   Replacement   No   1/2" 600#   No   1			•	eired or Replac	ced and Repl	lacement Component	8	· · · · · · · · · · · · · · · · · · ·	
Ckolet		Identification	of Components Rop	Manufacturer	National Board	Other	Year	Replaced,	Code Stamped (Yes
De Jnknown N/A N/A 1"-E88-14 1971 Replaced No 1/2" sch 160 Chicago Tube & Iron HT# 282792 N/A 1987 Replacement No 1/2" 600# Hub Inc. HT# 1945NF N/A 1990 Replacement No 1/2" 600#		Identification  Name of Component	of Components Rop  Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
72" sch 160	kole	Name of Component  O# Sockolet  1/2" 6000#	of Components Rop  Name of Manufacture	Manufacturer Serial No. N/A	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
Inge Hub Inc. HT# 194SNF N/A 1990 Replacement No	kole sch	Name of Component  O# Sockolet  1/2" 6000#	Name of Manufacture Unknown Energy Steel	Manufacturer Serial No. N/A HT# Z-295	National Board No. N/A	Other Identification	Year Built 1971 1990	Replaced, or Replacement  Replaced  Replacement  (Remaved)	Code Stamped (Yes or No) No
/2" 600#	sch sch 7211	Name of Component  # Sockolet 1/2" 6000# et 160 sch 160	Name of Manufacture  Unknown  Energy Steel  Unknown Chicago	Manufacturer Serial No. N/A HT# Z-295	National Board No. N/A N/A	Other Identification	Year Built 1971 1990	Replaced, or Replacement  Replaced  Replacement (Remaved) Replaced	Code Stamped (Yes or No) No
	ckole sch pe 1/2" pe 1/2" ange	Name of Component  O# Sockolet 172" 6000# et 160 sch 160	Name of Manufacture  Unknown Energy Steel Unknown Chicago Tube & Iron	Manufacturer Serial No. N/A HT# Z-295 N/A HT# 282792	National Board No. N/A N/A N/A	Other Identification	Year Built 1971 1990 1971 1987	Replaced, or Replacement  Replaced  Replacement (Remaved) Replaced  Replacement	Code Stamped (Yes or No)  No No

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8% in. x 11 in.,(2)information in itema 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.



	sockolet and 1" piping with a 10"x1 1/2" sockolet, 1 1/2" piping and 1 1/2" 600 # flanges. All welds were etrant inspected and accepted. A hydro was also performed and accepted. An NCR 90-056 was written on the
	weld 10 and dispositioned "use as is". Note: this modification also changed the ISI Section XI boundari
TOP	weld to and dispositioned "use as is", wote; this modification also changed the 151 Section Al bodical i
	CERTIFICATE OF COMPLIANCE
te	We certify that the statements made in the report are correct and this replacement correct and this replacement correct and the statement repear or replacement
	Type Code Symbol Stamp None
	Certificate of Authorization No. None Expiration Date
	signed Surudu Shaufai codes & Materials, TGL Date 8-31-
	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 'nspectors and the State or Province of <u>Iowa</u> and employed by <u>Hartford Steam Boiler</u> of <u>Hartford, Connecticut</u> have inspected the components descri
ti	is Owner's Report during the period 6-15:30 to 7:32-32
ma ma	and state that to the best of my knowledge and belief, the Owner has perforded examinations and taken corresponds to the Owner's Report in accordance with the requirements of the ASME Code, Section XI.
11	By signing this certificate neither the Inspector nor his employer mekes any warranty, expressed or improcerning the examinations and corrective measures described in this Owner's Report. Furthermore, neithenspector nor his employer shall be liable in any manner for any personal injury or property damage or a long kind arising from or connected with this inspection.
	Sent / restro Commissions NB 8829(I)(N) 941-IA
-	Inspectors Signature National Board, State, Province, and Endors
1	ste 9-7 19 <i>90</i>

	Owner <u>Iowa Elect</u>	tric Light and Por Name	wer		Date <u>August</u>	30,1990	<u> </u>	
	P.O.Box 351, Ca			<del></del>	Sheet <u>1 of</u>	2	·	
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
	Plant Duane Arno	old Energy Center Name	***		Unit1_			
	3277 DAEC Rd.	Palo, IA 52324				PMAR #1	045050° P.O. 5115	5
	Address		<u> </u>				organization P.O.	
	Work Performed b	y Iowa Electric			Type Code Symbol	Stamp_	None	
		Name .			Authorization No.	•	None	· · · · · · · · · · · · · · · · · · ·
	3277 DAEC Road	Palo, IA 52324			Expiration Date	··	None	
	Identification (	Address		ol Svetem (i	Class 1)			
			ECARAGE COITE	or system (	J ( 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1			-
	(a)Applicable Co	onst. Code ANSI B3	31.7	19 <u>_67</u>	Edition,		Addenda,	N/A Ce
	(c)Constructi *item repla	on Code of Replace cad same code of	ement item <u>Sec</u>	ction III 197	or Replecements 19 7 <u>4</u> Edition, <u>w76</u> Adde lacement Component	nda with	Code Case <u>1644-5*</u>	•
	·	T			T		<del></del>	<del></del>
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
	Component			Board			Replaced,	Code Stamped (Yes
ubbei	Component	Manufacture Pacific- Scientific		Board			Replaced,	Code Stamped (Yes
ubbei chan	Component	Manufacture	Serial No.	Board No.	Identification	Built	Replaced, or Replacement	Code Stamped (Yes or No)
ubbei chan	Component	Manufacture Pacific- Scientific Pacific-	Serial No.	Board No.	Identification  DBA-004-SS-001	1983	Replaced, or Replacement	Code Stamped (Yes or No)
ubbei chan	Component	Manufacture Pacific- Scientific Pacific-	Serial No.	Board No.	Identification  DBA-004-SS-001	1983	Replaced, or Replacement	Code Stamped (Yes or No)
ubbei chan	Component	Manufacture Pacific- Scientific Pacific-	Serial No.	Board No.	Identification  DBA-004-SS-001	1983	Replaced, or Replacement	Code Stamped (Yes or No)
ubbei chan	Component	Manufacture Pacific- Scientific Pacific-	Serial No.  SN21141  SN21145	Board No. N/A N/A	Identification  DBA-004-SS-001  DBA-004-SS-001	1983	Replaced, or Replacement	Code Stamped (Yes or No)
ubbei chan	Component	Manufacture  Pacific- Scientific Pacific- Scientific Ork Replaced Sm.	Serial No.  SN21141  SN21145	Board No. N/A N/A	Identification  DBA-004-SS-001  DBA-004-SS-001	1983 1982	Replaced, or Replacement	Code Stamped (Yes or No)
achan ubber	Component  Ical  Ical  Description of W	Manufacture  Pacific- Scientific Pacific- Scientific Ork Replaced Sm.	Serial No.  SN21141  SN21145	Board No. N/A N/A	Identification  DBA-004-SS-001  DBA-004-SS-001	1983 1982 Operation	Replaced, or Replacement  Replaced  Replacement	Code Stamped (Yes or No)



	CERTIFIC	CATE OF COMPLIANCE		
We certify that the state to the rules of the ASME Co	atements made in the rep de, Section XI.	ort are correct and	this <u>replacement</u> repair or replaceme	ent
Type Code Symbol Stamp	None	•		
Certificate of Authori	zstion No. <u>None</u>		Expiration	Date ,
Signed Survid	er Shaupain 's Designee, Title	Cedes & Materials	. TGL Date 9-1-	<u></u>
	CERTIFICATE O	OF INSERVICE INSPECT	ION	
I, the undersigned, holdin Inspectors and the State or ofof this Owner's Report during	g a valid commaission i Province ofI Brtford, Connecticut	s <b>sued by</b> the Nation	nal Board of Boiler and Pr	Boile
, and state that to the best measures described in the O	of my knowledge and bel	ief, the Owner has p	erformed examinations and ta	
By signing this certific concerning the examinations Inspector nor his employers any kind arising from or co	and corrective measures shall be liable in any m	described in this anner for any persor		e, ne
Inspectors Signatur		Commissions NB 88	29(I)(N) 941-IA Board, State, Province, an	d End
mspectors aignatur	<del>u</del>	nationel	board, state, province, an	e cno

	Owner <u>lowa Elect</u>	tric Light and Po Name	wer		Date <u>August</u>	31,1990	)		
	P.O.Box 351, Ca	edar Rapids, IA 5 Address			Sheet 1 of	2			
	Plant Duane Arno	old Energy Center			Unit 1				
		Name		-					
	3277 DAEC Rd. Address	Palo, IA 52324				PMAR #1 Repair	045052, P.O. 2961 Organization P.O.	2 No.,Job No	-
	Work Performed b	Dy <u>Iowa Electric</u> Name			Type Code Symbol	Stamp_	None	·	
		N Calles			Authorization No.	•	None		
	3277 DAEC Road	Palo, IA 52324 Address		<del></del>	Expiration Date		None		
	Identification o	of System <u>Reac</u>	tor Vessel Hea	d Vent (cla	ss 1)				
	(a)Applicable Co	onst. Code <u>ANSI B</u>	31.7	19 <u>_67</u>	Edition,		Addenda,	N/A	_Co
	(c)Constructi *item repla	on Code of Replace ced same code of	ement item <u>Sec</u>	ction III 197	or Replacements 19 7 <u>4</u> Edition, <u>w76</u> Adder	nda with	Code Case <u>1644-5</u> *	•	
	Identification o	of Components Repa	aired or Repla	cad and Rep	lecement Component	S			
	Name of Component	Name of Manufacture	maired or Repla Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repoired Replacad, or Replacement	ASME Code Stamped (Yes or No)	
	Name of Component	Name of Manufacture	Manufacturer	Nationsl Board	Other	Year	Replaced,	Code Stamped (Yes	
ber	Name of Component	Name of Manufacture Pacific- Scientific	Manufacturer	Nationsl Board	Other	Year	Replaced,	Code Stamped (Yes	
ber ani	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replacement	Code Stamped (Yes or No)	
ber ani	Name of Component	Name of Manufacture Pacific- Scientific Pacific-	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)	
ber ani	Name of Component	Name of Manufacture Pacific- Scientific Pacific-	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)	
ber ani	Name of Component	Name of Manufacture Pacific- Scientific Pacific-	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)	
ber ani ber	Name of Component	Name of Manufacture Pacific- Scientific Pacific-	Manufacturer Serial No. SN 1311 SN 2237	National Board No. N/A	Other Identification DBA-009-SS-002B DBA-009-SS-002B	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)	
ber ani ber	Name of Component	Name of Manufacture  Pacific- Scientific Pacific- Scientific	Manufacturer Serial No. SN 1311 SN 2237	Nationsl Board No. N/A N/A	Other Identification  DBA-009-SS-002B  DBA-009-SS-002B	Year Built 1977 1986	Replaced, or Replacement	Code Stamped (Yes or No)	-

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8% 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.



		<del></del>		<u> </u>
		CERTIFICATE OF COMPLI	AMPE	
	y that the statements made in f the ASME Code, Section XI.	the report are corre		ent co or replacement
Type Code	Symbol Stamp Nons			
Certifica	te of Authorization No. No.	one		Expiration Date
	n , op ,	·		0-31-
Signed	Suruder Shauf wher or Owner's Designee, Titl	Codes & Mat	erials, TGL Date	0-3/-
0	wher or Owner's Designee, 119		···	
	CENTIL	FICATE OF INSERVICE I	HEREFTION	
		- · · · · · · · · · · · · · · · · · · ·		
	igned, holding a valid commist the State or Province of			
of	Hartford, Connect eport during the period	icut	have inspected the	e components descr
this Owner's R	eport during the period st to the best of my knowledge	and belief, the Owner	has performed examina	tions and taken corr
measures descr	ibed in the Owner's Report in	accordance with the	requirements of the AS	ME Code, Section XI
	this certificate neither the			
	examinations and corrective mains amployer shall be liable i			
	ng from or connected with this		personat mjury or pro	percy damage or a
Sin	Th /2/1/10-	Commissions	NB 8829(I)(N) 941-IA	
Inspec	tors Signature	N:	ations Board, State,	rovince, and Endors

Owner <u>Iowa Elec</u>	ctric Light and Po Name	wer		Date <u>Septem</u>	mber 18,	1990		
2.0.0	<u></u>	22.04						
P.U.BOX 351, (	<u>Cedar Rapids, IA 5</u> Address			Sheet <u>1 of</u>	2		-	
Plant Duane Are	nold Energy Center			Unit 1				
Traine	Name	<del> </del>					<del>-</del>	
3277 DAEC Rd.	Palo, IA 52324				CMAR #A	. 02662 P.O. 4533	7	
Address	8				Repair	Organization P.O.	No., Job N	o.
Work Performed	by Iowa Electric			Type Code Symbol	Stamp_	None		
	Name			Authorization No	_	None		
					•	Notice		
3277 DAEC ROSC	Palo, IA 52324			Expiration Date		None		
	Address			_				
Identification	of System <u>RHR</u>	<u>Fuel Pool Cool</u>	ing (Class	2)				
	•					•		
(a)Applicable C Case	Const. Code <u>ANSI B</u>	31.7	19 <u>_67</u>	Edition,	· · · · · · · · · · · · · · · · · · ·	Addenda,	N/A	co
(b)Applicable E	dition of Section	XI Utilized f	or Pensirs	or Paniscomente 10	180 US1			
	of Components Rep	on co or kepta	Cao alo kepi	Tacement Component	.s 	1	T	ì
Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replacad, or Replacement	ASME Cede Stamped (Yes or No)	
e plate of iable Support	Bethlehem Steel	HT411P3471	N/A	H88-25-H163	1988	Boni cocono		
			14/74	1100-23-1103	1700	Replacement	No	
							<u> </u>	,
·								
						<u> </u>	نـــــا	
Description of N	Jork <u>Replacad bes</u>	e and shim pla	ate for vari	able support				
						_		
Tests Conducted:	: Hydrostatic	Pneus	mtic	Nominal C	peration	) Pressure		
	Other	Pressure	N/A	psi Test Tam	_	N/A °F	_	
					۰			
NOTE: Supplement	tal sheets in form	of lists, ske	etches, or d	rawings may be use	ed. prov	ided (1) size is	RV in =	11
	ion in items 1 thr neets is racorded			included on each	sheet, a	nd (3) each sheet	is numbe	red .
and imper of 20	reers is tacolded	at the top of	this form.					
	_							

	performed, reference	1100001011 /0 212	occarance from na
line 4"-GBB-17 is at least 5/8".			
			···-
Œ	RTIFICATE OF COMPLIANC	E	
We certify that the statements made in the to the rules of the ASME Code, Section XI.	ne report are correct :		ment or replacement
to the rules of the ASME Lode, Section XI.		repair	or reptacement.
Type Code Symbol Stamp None	· · · · · · · · · · · · · · · · · · ·		-2111-111
Certificate of Authorization NoNon	e		Expiration Date
Street The Street	Codes & Materi		1 1 5 2
Owner or Owner's Designee, Title		als, IGL_ Date _	· · · · · · · · · · · · · · · · · · ·
	ALT: AF INSPINIOR 1966	cottou	
I, the undersigned, holding a valid commiss	CATE OF INSERVICE INSP		Moiler and Pressur
Inspectors and the State or Province of	Cowa 6	and employed by Ha	artford Steam Boile the components desc
this Owner's Report during the period, and state that to the best of my knowledge ar	5-17-9-0	to9	-21-92
measures described in the Owner's Report in a	ccordance with the req	uirements of the /	SME Code, Section
By signing this certificate neither the In concerning the examinations and corrective me	spector nor his employ	er makes any warra	enty, expressed or
Inspector nor his employer shall be liable in any kind arising from or commected with this	any manner for any per	rsonal injury or p	roperty damage or a
	Commissions NB	8829(I)(N) 941-1	A
Inspectors Signature	Natio	onal Board, State,	Province, and Endo

	Owner Iowa Elec	ctric Light and Po Name	wer		Date <u>Septem</u>	ber 13,1	990	
	D O Box 751		24.04		Shoot 1 -4	2		
	F.U.BOX 331, (	<u>Cedar Rapids, IA 5</u> Address			Sileet 1 Of	۷		
	Plant Duane Arr	nold Energy Center			Unit1			
		Nema						
		Palo, IA 52324				CMAR #9	1614, P.O. S49 <b>8</b> 99	1
	Addres	8				Repoir (	Organization P.O.	No.,Job No.
	Work Performed	by <u>Iowa Electric</u>			Type Code Symbol	Stemp_	None	
		nair			Authorization No.	· 	None	
	3277 DAEC Road	Palo, IA 52324			Expiration Date _		None	
		Address						÷
	Identification	of System <u>Main</u>	Steem line 3"	-EBD-5 (clas	s 2)			<del></del>
			=	- يون	1			٠
	(a)Applicable ( Case	Const. Code <u>ANSI B</u>	31.1	19 <u>_67</u>	Edition,N	/A	Addenda,	N/A C
		dition of Section	XI Utilized f	or Repairs o	or Replacements 19	80 W81	class 2	
<u> </u>				National			Repaired	ASME Code
	Name of Component	Name of Manufacture	Manufacturer Serial No.	Board No.	Other Identification	Year Built	Replaced, or Replacement	(Yes or No)
		ANCHOR			1 _			
lve	Bonnet	ANCHOR Darting ANCHOR	c31745	N/A	v03-0005	1990	Replacement	No
	Bonnet Disk	Darling	C31745 S/N U5212	N/A N/A	v03-0005 v03-0005	1990 1990	Replacement Replacement	NO NO
		Darting ANCHOR						
		Darting ANCHOR						
		Darting ANCHOR						
		Darting ANCHOR						
	Disk	Darting ANCHOR	S/N U5212	N/A	v03-0005			
	Disk	Darling ANCHOR Darling  Work Replaced val	S/N U5212	N/A valve disk.	v03-0005	1990	Replacement	NO
	Disk  Description of	Darling ANCHOR Darling  Work Replaced val	s/N U5212	N/A valve disk.	v03-0005	1990	Replacement  Prossure	
	Disk  Description of	Darling ANCHOR Darling  Work Replaced value: Hydrostatic	s/N U5212	N/A valve disk.	V03-0005	1990	Replacement  Prossure	NO



fit. VT-2 inservice test was performed under	er ISI No. 90-361.
The Trade Tigo Cook may post to time when	
100000	CERTIFICATE OF COMPLIANCE
We certify that the statements made to the rules of the ASME Code, Saction XI	in the report are correct and this <u>replacement</u> c
	F
Type Code Symbol Stamp Nona	
· · · · · · · · · · · · · · · · · · ·	
Certificate of Authorization No	Nons Expiration Date
C., a., CD	0.2
Signed	itle Codes & Materials, TGL Date 9-3-
Owner or Owner's Designee, I	intle
CEI	RTIFICATE OF INSERVICE INSPECTION
I, the undersigned, holding a valid con	maission issued by the National Board of Boiler and Pressure
Inspectors and the State or Province of of Hartford, Conn	Iowa and employed by <u>Hartford Steam Boiler</u> ecticut have inspected the components descr
this Owner's Report during the period	ecticut have inspected the components described to 2-2/-2
	ge and belief, the Owner has performed examinations and taken cor in accordance with the requirements of the ASME Code, Section X
Dy signing this cortificate paither th	ne Inspector nor his employer makes any warranty, expressad or i
concerning the examinations and corrective	e measures described in this Owner's Report. Furthermore, neit
Inspector nor his employer shall be liable any kind arising from or connected with t	e in any manner for any personal injury or property damage or a this inspection.
	·
Inspectors Signature	Commissions NB 8829(I)(N) 941-IA National Board, State, Province, and Endor
Date Sept 21 1998	

	Owner <u>lowa Elec</u>	tric Light and Po Name	wer		Date <u>Septem</u>	ber 13,	1990	
	P.O.Box 351, C	edar Rapids, IA 5 Address			Sheet 1 of	2		
	Plant <u>Duane Arn</u>	old Energy Center Name			Unit 1	· <u> </u>	<del> </del>	
		Palo, IA 52324	<u> </u>				1616, P.O. S49 <b>89</b> 7	
	Address	1				Repair (	Organization P.O.	No.,Job No.
	Work Perfo <b>rmed</b>	by <u>Iowa Electric</u> Name			Type Code Symbol	Stamp_	None	
		it control			Authorization No.	·	None	
	3277 DAEC Road	Palo, IA 52324 Address			Expiration Date		None	-
	Identification	of System <u>Main</u>		-EBD-5 (clas	ss 2)			
		onst. Code <u>ANSI B</u>	31.1	19 <u>67</u>	Edition,N	/A	Addenda,	N/A
	Case (b)Applicable E	dition of Saction	XI Utilized f	or Repairs	or Replacements 19	80 W81	class 2	
				•	•			
	Identification	of Components Rep	airod or Repla	ced and Repi	lacement Component	s		
_								ASME
	Name of	Name of	Manufacturer	National Board	Other	Year	Repaired Replaced.	Code
	Name of Component	Name of Manufacture	Manufacturer Serial No.		Other Identification	Year Built	Repaired Replaced, or Replacement	1 - 1
				Board			Replaced,	Code Stamped (Yes
lve	Component	Manufacture  ANCHOR	Serial No.	Board No.	Identification	Built	Replaced, or Replacement	Code Stamped (Yes or No)
	Component	ANCHOR Darling ANCHOR	Serial No.  (Part No.) C31745	Board No.	Identification	1990	Replaced, or Replacement	Code Stamped (Yes
	Component	Manufacture ANCHOR Darling	Serial No.	Board No.	Identification	Built	Replaced, or Replacement	Code Stamped (Yes or No)
	Component	ANCHOR Darling ANCHOR	Serial No.  (Part No.) C31745	Board No.	Identification	1990	Replaced, or Replacement	Code Stamped (Yes or No)
	Component	ANCHOR Darling ANCHOR	Serial No.  (Part No.) C31745	Board No.	Identification	1990	Replaced, or Replacement	Code Stamped (Yes or No)
	Component	ANCHOR Darling ANCHOR	Serial No.  (Part No.) C31745	Board No.	Identification	1990	Replaced, or Replacement	Code Stamped (Yes or No)
	Component  Bonnet  Disk	ANCHOR Darling ANCHOR Darling	(Part No.) c31745 S/N U5218	Board No. N/A N/A	Identification V03-0004 V03-0004	1990	Replaced, or Replacement	Code Stamped (Yes or No)
•	Component  Bonnet  Disk	ANCHOR Darling ANCHOR	(Part No.) c31745 S/N U5218	Board No. N/A N/A	Identification V03-0004 V03-0004	1990	Replaced, or Replacement	Code Stamped (Yes or No)
	Component  Bonnet  Disk	ANCHOR Darling ANCHOR Darling Darling	(Part No.) c31745 S/N U5218	Board No. N/A N/A	Identification	1990 1990	Replaced, or Replacement  Replacement  Replacement	Code Stamped (Yes or No)
	Bonnet Disk  Description of 1	ANCHOR Darling ANCHOR Darling Darling	(Part No.) c31745 S/N U5218	No.  N/A  N/A  valve disk.	Identification	1990 1990	Replaced, or Replacement  Replacement  Replacement	Code Stamped (Yes or No)

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.



reptaced and	that seat machining was re	equirod. Replacements ware	performed and the disc was machined	to a pr
fit. VT-2 was	performed under ISI No. 90	0-361.		
	<u> </u>			
		CERTIFICATE OF COMPL	IANCE	
We cer	tify that the statements ma	ade in the report are corr	ect and this <u>replacement</u>	conf
	s of the ASME Code, Section		repair or replacement	P.
Type Co	ode Symbol Stamp <u>None</u>			
	·	<b>M</b>	Furiantia A	
Certif	cate of Authorization No.	None	Expiration Da	
	Summer S.P.	~ A 1 1 2 A	terials, TGL Date 9-18-90	4.5
Signea	Owner or Owner's Designer	e Title	terials, IGL Date 1 10 71.	
		-,		
·	* · · · · · · · · · · · · · · · · · · ·			
		CERTIFICATE OF INSERVICE	INSPECTION	
I, the unde	rsigned, holding a valid	commission issued by the	National Board of Boiler and Pre	ssure Ve
Inspectors	and the State or Province o	of <u>Iowa</u>	and employed by <u>Hartford Steem B</u> have inspected the components	describe
this Owner's	Repart during the period	4-6-90	to 5-2/-92	
, and state	that to the best of my know	wledge and belief, the Owne	r has berformed exeminations and take requirements of the ASME Code, Sect	on correc
measures de:	scribed in the owner's kept	ort in accordance with the	requirements of the ASME code, sect	ION AL.
			ployer makes any warranty, expressed	
			n this Owner's Report. Furthermore, personal injury or property damage	
	ising from or consected wit		personat injury or property damage	U1 a (U)
1	+ // // 1	'		
30	Ell Frish	Commissiona_	NB 8829(I)(N) 941-IA	
Ins	pectors Signature		Mational Board, State, Province, and	Endorsen
1				
}	Sept 2/ 1990			

	Owner <u>Iowa Elect</u>	ric Light and Pow Name	Her		Date Augus	t 31,1990		
	P.O.Box 351, Ce	dar Rapids, IA 52	2406		Sheet <u>1 of</u>	2		
-	`	Address						
	Plant Duane Arno	ld Energy Center Name			Unit1			
	3277 DAEC Rd. Address	Palo. IA 52324				CMAR #9	<u>8669 (EMA)</u> Organization P.O.A	No. Job No.
			~					
	Work Performed b	y lowa Electric Nama					None	
			•		Authorization N	o	None	
	3277 DAEC Road	Palo, IA 52324 Address			Expiration Date		None	
	Identification o	f System RHR L	ine 2"-GBB-3	(class 2)				
		nst. Code <u>ASME Se</u>	ection III	19 <u>_71</u>	Edition,	W72	Addenda,	<u>N/A</u> C
	Case (b)Applicable Ed	ition of Section	XI Utilized f	or Repairs (	or Replacements	9 <u>80 w81</u>	class 2	
				·	·		class 2	
	(b)Applicable Ed			·	·	nts Year	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
	(b)Applicable Ed  Identification o  Name of Component	f Components Repaired Name of Manufacture	Manufacturer Serial No.	ced and Repi National Board No.	Other Identification	Year Built	Repaired Replaced,	Code Stamped (Yes
Nve V	(b)Applicable Ed  Identification o	f Components Repa Name of Manufacture	aired or Repla	ced and Repl National Board	lacement Componer	nts Year	Repaired Replaced,	Code Stamped (Yes
*	(b)Applicable Ed  Identification o  Name of Component	f Components Repaired Name of Manufacture	Manufacturer Serial No.	ced and Repi National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	Code Stamped (Yes or No)
ld 40	(b)Applicable Ed  Identification o  Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	Code Stamped (Yes or No)
alve V	(b)Applicable Ed  Identification o  Name of Component	Name of Manufacture  Velan Valve Co.  Iowa Electric	Manufacturer Serial No. 38.1	National Board No.	Other Identification  2º EBB-GT  2º GBB-3	Year Built 1974	Repaired Replaced, or Replacement Replacement Replacement	Code Stamped (Yes or No) YES

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ in. x 11 in.,(2)information in itema 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.



	I report # 90-301.			
		CERTIFICATE OF COMP	LIANCE	
	tify that the statements made is of the ASME Code, Section XI.			or replacement co
Type Co	ode Symbol Stamp <u>None</u>			· · · · · · · · · · · · · · · · · · ·
Certif	icate of Authorization No			Expiration Date
Signed	Owner or Owner's Designee, Ti		aterials, TGL Date _	4-1-
	CERT	IFICATE OF INSERVICE	INSPECTION	
Inspectors a	ersigned, holding a valid command the State or Province of	<u>Iowa</u>	and employed by <u>Ha</u> have inspected t	rtford Steam Boiler he components descri
this Owner's , and state measures des	s Report during the period	e and belief, the Own n accordance with th	er has performed examina e requirements of the A	ations and taken corr SME Code, Section XI
concerning to	ng this certificate neither the the examinations and corrective or his embloyer shall be liable ising from or compacted with th	measures described in any menner for a is inspection.	in this Owner's Report. ny personal injury or pr	Furthermore, neith operty damage or a l
ins	pectors Signature	Commissions	NB 8829(I)(N) 941-I/ National Board, State,	Province, and Endors
1 .	0 - 03		•	

		Nama	er .		Date <u>Septem</u>	ber 12,1	990	
	P.O.Box 351,	Cedar Rapids, IA 52	406		Sheet <u>1 of</u>	2		
		Address						
	Plant <u>Duane</u> Ar	nold Ener gy Center Name			Unit 1			
	3277 DAEC DA	Palo, IA 52324				DCD 1/4	4. CMAR #A 03257	
	Addres						Organization P.O.	
	Work Performed	by Iowa Electric			Type Code Symbol	Stamo	None	
		Name						
					Authorization No.	•	None	
	7277 0450 000	d 0ala 14 5373/			<b>F</b>			
	32// DAEC KOE	d Palo, IA 52324 Address		<del></del>	Expiration Date	<del></del>	None	
	•					445	4.	
	Identification	of System <u>React</u>	or Water Clea	nup line (4	" DCA- 6 & 4" DCA-	·14) (Cla	ass 1)	
	/alammiiaahia	Compa Code ANCI DZ	4 7	10 (0	· Palinian	1071	A -4-4-4-	11.64
	(a)Applicable Case	Const. Code ANSI B3	1.7	19 69	Edition,	1971	Addenda,	N/A
	Cas <b>e</b>	Const. Code ANSI B3 Edition of Section :						N/A
	Cas <b>e</b>							<u>N/A</u>
	Case (b)Applicable		XI Utilized f	or Repairs (	or Replecements 19	2 <u>80 481</u>		<u>N/A</u>
	Case (b)Applicable	Edition of Section :	XI Utilized f	or Repairs (	or Replecements 19	2 <u>80 481</u>		N/A
	Case (b)Applicable	Edition of Section :	XI Utilized f	or Repairs (	or Replecements 19	2 <u>80 481</u>	1	ASME
	Case (b)Applicable	edition of Section of Components Repa	XI Utilized f	or Repairs ( ced and Rep	or Replecements 19	9 <u>80 W81</u>	Repaired	ASME Code
	Case (b)Applicable Identification	edition of Section of Components Repa	XI Utilized f	or Repairs (	or Replecements 19	2 <u>80 481</u>	1	ASME
	Case (b)Applicable  Identification  Nema of	of Components Repa	XI Utilized f irod or Repla Manufacturer	or Repairs of ced and Repo	or Replecements 19 Lacement Component	980 W81	Repaired Replaced,	ASME Code Stamped
	Case (b)Applicable  Identification  Nema of	of Components Repa	XI Utilized f irod or Repla Manufacturer	or Repairs of ced and Repo	or Replecements 19 Lacement Component	980 W81	Repaired Replaced,	ASME Code Stamped (Yes
-	Case (b)Applicable  Identification  Nema of	of Components Repa	XI Utilized f irod or Repla Manufacturer	or Repairs of ced and Repo	or Replecements 19 Lacement Component	980 W81	Repaired Replaced,	ASME Code Stamped (Yes
d CU	Case (b)Applicable  Identification  Nema of Component	of Components Repa  Name of Manufacture	XI Utilized f irod or Repla  Manufacturer Serial No.  N/A  N/A	ced and Rep National Board No.	Other Identification	year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
d CU	Case (b)Applicable  Identification  Nema of Component  IA-A-01  IB-A-01	of Components Repa  Name of Manufacture  Towa Electric	Manufacturer Serial No.  N/A  N/A  (pert no.)	or Repairs of ced and Report National Board No.	Other Identification  FW-1	Year Built 1990	Repaired Replaced, or Replacement Replacement	ASME Code Stamped (Yes or No) No
d CU d CU labl port	Case (b)Applicable  Identification  Nema of Component  IA-A-01  B-A-01  e	Name of Manufacture  Towa Electric  Lowa Electric  Bergen-Patterson	Manufacturer Serial No.  N/A  N/A  (pert no.)  VS18-6  SR5-	need and Report National Board No.	Other Identification  FW-1 FW-14 DCA-14-H-A2	Year Built 1990 1991	Repaired Replaced, or Replacement Replacement Replacement Replacement	ASME Code Stamped (Yes or No)
d CU	Case (b)Applicable  Identification  Nema of Component  IA-A-01  IB-A-01  E	of Components Repa  Name of Manufacture  Towa Electric	Manufacturer Serial No.  N/A  N/A  (pert no.) VS18-6 SR5- 06-RO	or Repairs of ced and Report National Board No.	Other Identification  FW-1	Year Built 1990	Repaired Replaced, or Replacement Replacement	ASME Code Stamped (Yes or No) No
d CU iabl port	Case (b)Applicable  Identification  Nema of Component  IA-A-01  B-A-01  e  rut e	Name of Manufacture  Towa Electric  Lowa Electric  Bergen-Patterson	Manufacturer Serial No.  N/A  N/A  (pert no.)  VS18-6  SR5-	need and Report National Board No.	Other Identification  FW-1 FW-14 DCA-14-H-A2	Year Built 1990 1991	Repaired Replaced, or Replacement Replacement Replacement Replacement	ASME Code Stamped (Yes or No) No

the number of sheets is recorded at the top of this form.

FORM NIS-2 (Back) sheet 2 of 2

	ers ware modified for better supporting purposes. Welds were RT, PT and UT(90-66 & 90-81) preserviced exa er DCA-14-SR-A2 was VT-3/4 preservice examined (90-351) as was DCA-14-H33 (90-352). VT-2 was performed un
ar r	IEL DEATHS THE SKEAZ WAS VIEGA DIESELATER EXCHINITIED (20-331) as was new 14 113 (20 325) at 5 was believed at
SI	# 90-365.
	CERTIFICATE OF COMPLIANCE
to	We certify that the statements made in the report are correct and this <u>repair</u> contact the rules of the ASME Code, Section XI. repair or replacement
	Type Code Symbol Stamp None
	Certificate of Authorization No. None Expiration Date
	Signed Sumulu Show for Codes & Materials, TGL Date 9-14-, 19 Owner or Owner's Designee, Title
	CERTIFICATE OF INSERVICE INSPECTION
Ir	the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Volume and the State or Province of
	and state that to the best of my knowledge and belief, the Owner has berformed examinetions and taken corresponded in the Owner's Report in accordance with the requirements of the ASME Code, Section XI.
Ir	By signing this certificate noither the Inspector nor his employer makes any warranty, expressad or imponcerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither spector nor his employer shall be liable in any manner for any personal injury or property damage or a losy kind arising from or connected with this inspection.
_	Scott / Commissions NB 8829(I)(N) 941-IA
	Inspectors Signature National Board, State, Province, and Endorse

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

	OMINET TOMA CTCC.	Name	wer	-	Date <u>Septem</u>	ber 5.	1990	
	P.O.Box 351, Ce	edar Rapids, IA 5 Address			Sheet <u>1 of</u>	2		
	Plant Nuane Arno	ald Engrav Center	•		Unit <u>1</u>			
	Prairie pagine Arrice	Name		············				
		Palo, IA 52324				CMAR #9	0609 (EMA), P.O.s	49610
	Address			-		Repair	Organization P.O.	No., Job No.
	Work Performed b	y <u>Iowa Electric</u> Nama			Type Code Symbol	Stamp_	None	
		renie			Authorization No.	•	None	
	3277 DAEC Road	Palo, IA 52324 Address		<del></del>	Expiration Date	<del></del>	None	
	Identification o			1 (Class 1)				
	(a)Applicable Co	inst. Code ASME PI	IMP & VAIVE CO	YNF 10 AR	Edition,		Addondo	N/A 6
	Case (b)Applicable Ed (c)Construction	lition of Section on Code of Replac	XI Utilized f	or Repairs	or Replacements 19	80 <b>481</b>		N/A Co
	* which meet	ts or exceeds 198	36 Edition.		acement Component			
	,			National			Repaired	ASME
	Name of Component	Name of Manufacture	Manufacturer Serial No.		Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
)		Manufacture		Board			Replaced,	Stamped (Yes
ve l	Component			Board			Replaced,	Stamped (Yes
ve I	Component	Manufacture  ANCHOR	Serial No.	Board No.	Identification	Built	Replaced, or Replacement	Stamped (Yes or No)
l ve I	Component	Manufacture  ANCHOR	Serial No.	Board No.	Identification	Built	Replaced, or Replacement	Stamped (Yes or No)
ve	Component	Manufacture  ANCHOR	Serial No.	Board No.	Identification	Built	Replaced, or Replacement	Stamped (Yes or No)
ve I	Component	Manufacture  ANCHOR  Darling	Serial No.	Board No.	Identification  MO-2312	1990	Replaced, or Replacement	Stamped (Yes or No)
lve I	Component	Manufacture  ANCHOR  Darling  ork Replaced val	Serial No.	Board No.	Identification  MO-2312	1990 it.	Replaced, or Replacement  Replacement	Stamped (Yes or No)
lve	Description of Wo	Manufacture  ANCHOR  Darling  ork Replaced val	ve disk and re	Board No.	Identification  MO-2312	1990	Replaced, or Replacement  Replacement	Stamped (Yes or No)

(ANII) 1/ 2000-12-27-90

#### FORM NIS-2 (Back) sheet 2 of 2

80-20	A VT-2 inspection was performed under 89-13.		
09-20.	A VI-2 inspection was performed under 69-13.	•	······································
		<u> </u>	
			<u> </u>
	· CERTIF	FICATE OF COMPLIANCE	
	We certify that the statements made in the r ne rules of the ASME Code, Section XI.		pair or replacement
"	is received in the name water according to	16	part of reprocement
	Type Code Symbol Stamp None		
	Type code symbol stamp Notice		<del></del>
	Certificate of Authorization No. None		F
ļ			
	signed Sundie Stanfor	, order a Managarata a Tollanda	
1	Owner or Owner's Designee, Title	Lodes & Materials, IGL Da	te
L			
	CERTIFICATE	OF INSERVICE INSPECTION	
I, t	he undersigned, holding a valid commission of the State of Province of	issued by the National Board	of Boiler and Pressure \
	ectors and the State or Province of	have inspec	ted the components describ
l this	Owner's Report during the period	2 <i>c</i> : • <i>c c</i> to	12.29.9.50
meas	ures described in the Owner's Report in accor-	dance with the requirements of	the ASME Code, Section XI.
B.	signing this certificate neither the Inspec	tor nor his employer mekes any	warranty, expressed or im
conc	erning the examinations and corrective measure ector nor his employer shall be liable in any	es described in this Owner's Re	port. Furthermore, neither
any	cind arising from or conjected with this insp	mainer for any personat injury ection.	or property damage or a to
1	heath Prules	Compingions UD 0000(1)(N)	0/4 14
<del></del>	Inspectors Signature	Commissions NB 8829(I)(N) S	ate, Province, and Endorse
	•		,,
Date	Oct 29199		
1			



### FORM N-2 CERTIFICATE HOLDERS' DATA REPORT FOR IDENTICAL NUCLEAR PARTS AND APPURTENANCES\*

As Required by the Provisions of the ASME Code, Section III

Not to Exceed One Day's Production

Pg. 1 of 2

		d One Day's Production		Fg. 101.
ufactured and certified by And	:hor/Darling Valv	/e Co., 701 First S	t., William	<u>sport, PA 17701</u>
Iowa Elect	tric Liaht & Powe	er Co., P.O. Box 35		nids. Iowa 52406
		(name and address of Purchaser)		
tion of installation Duane	Arnold Energy Ce	nter, 3277 Daec Roa	id, Palo, Id	owa 52324
		(name and address)		
: <u>D8032</u> S	SA216-WCB	70,000 (tensile strength)	N/A (CRN)	1990 (year built)
TO A Constant III Division 4	1986	1988	1	N/A
E Code, Section III, Division 1:	(edition)	(addenda date)	(class)	(Code Case no.)
ested in accordance with Cont	st. Spec. (Div. 2 only)	N/A Revision _	N/A	DeteN/A
124 900#_63+6		(ng.)		
erks: <u>12"-900#-</u> Ga te	:			
A/DV Shop Ord	ier P-F650-1			
	sc Hydro Perform <mark>e</mark>			
. thickness (in.) <u>3-3/4</u> M	fin. design thickness (in.) _	1.25 Dia. ID (ft & in.) _	N/A Langth	overall (ft & in.)N/
n applicable, Cartificeta Holder	rs' Data Reperts are attach	ed for each item of this report:		
Part or Appurtenance	Nasianal	Part or Appu	renence	National
Serial Number	National Board No.	Serial Nu	1	Board No.
Senai Number	in Numerical Order	i I	···uer	in Numerical Order
	in Numerical Order			
<u>U5107</u>	N/A	(26)		
	<del>F</del>	(27)		<del></del>
	<del>-i.u</del>	(28)		
		(29)	1	<del></del>
,	<del> </del>	(30)		
)		(32)		
)		(33)	1	
)		(34)		
)		(34)(35)(36)		
		(34) (35) (36) (37)		
		(34)		
		(34) (35) (36) (37)		
		(34)		
		(34)		
		(34)		
		(34)		
		(34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45)		
		(34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45)		
		(34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47)		
		(34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45)		
		(34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48)		

upplemental information in the form of lists, sketches, or drawings may be used provided (1) size is 8½ × 11, (2) information in items 2 and 3 on this Data Report included on each sheet, (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

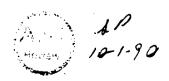
#### FORM N-2 (Back - Pg. 2 of 2\_\_)

		Certificate Hold	ier's Serial Nos	05107	through	
		CERTIFICATION OF DES	SIGN			
gri specifications certified by :	N/A	·	P.i	. State	Reg. no	
	N/A	(when applicable)			Reg. no	
in report* certified by	(	when applicable)	P.I	State	Neg. no	
		CERTIFICATE OF COMPL	IANCE			
ertify that the statements ma orms to the rules of construct			Disc			•
Cartificate of Authorization N	o. <u>N1713</u>		Expires	4/15/92	_	
	Anchor/Darlin	g Valve Company		Star	mett zed representatives	
		CERTIFICATE OF INSPEC	TION			. '
undarsigned, holding a valid	commission issued by	the National Board of Boil ercial Union Ins	er and Pressure Ve urance_Compa	sael Inspector	rs and the State &	<b>XXXXXX</b> 8 0
Boston Mass hav	e inspected these item	a described in this Deta Re	eport on 10-33-6	9ctin 2.		
of my knowledge and belief,				n accordance	with the ASME Co	de, Sectio
ivision 1. Each part listed has				nation copes	ming the equipme	ne describe
igning this certificate, neither is Data Report, Furthermore, i						
of any kind arising from or co			or are sery marmer	or drift pordor.		
2-23-90 Signed	Marks J	russ	Commissions	Penn	sylvania 23	92
-		ed inspected/ rles/Young	-	NET I. BO. (Incl. en	igorsements) and state o	r prov. and no.

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

	Owner <u>Iowa Ele</u>	ectric Light and Po Name	wer		Date _	Septen	<u>ber 13,</u>	1990	
	P.O.Box 351,	Cedar Rapids, IA 5			Sheet _	1 of	3		
	Plant_Duane Arnold Energy Center Name				Unit _	1			
	3277 DAEC Rd.	Palo, IA 52324					see CRD	table op cyc 10/	11
	Addres	38					Repair	Organization P.O.	No.,Job No
	Work Performed	by <u>lowa Electric</u> Name			Type Code	Symbol	Stamp_	None	
		ndile		,	Authoriza	tion No		None	
	3277 DAEC Rd.	Palo, IA 52324			Expiration	n Date .		None	
		Address							
	identification	of System <u>Conti</u>	rol Rod Drives	(Class 1)			<del></del>		
	Case (b)Applicable	Const. Code <u>ASME Se</u> Edition of Section	XI Utilized f	or Repairs	or Replacem	nents 19	980 W81		
	Case (b)Applicable (c) Origina		XI Utilized f ASME III 1968	or Repairs o B Edtion W68	or Replacem B Addenda p	ments 19 Her GE C Amponent	80 W81		
	Case (b)Applicable (c) Origina  Identification  Name of Component	Edition of Section L Construction Code of Components Repa	XI Utilized for ASME III 1960 maired or Replomated and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed and Asmed	or Repairs of B Edtion W68 ced and Repl National Board No.	or Replacem Addenda p Lacement Co	ments 19 mer GE C omponent er cation	280 w81 onstruct s	ion Quality Requi Repaired Replaced,	ASME Code Stamped (Yes
) Hous	Case (b)Applicable (c) Origina  Identification  Name of Component	Edition of Section L Construction Code of Components Repa Name of Manufacture	XI Utilized for ASME III 1968 aired or Reple Manufacturer Serial No.	or Repairs of B Edtion W68 ced and Repl National Board No.	Othe Identifi	ments 19 wer GE C omponent er cation able	980 w81 onstruct s Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
D Hous	Case (b)Applicable (c) Origina Identification  Name of Component	Edition of Section L Construction Code of Components Repa Name of Manufacture General Electric	XI Utilized for ASME III 1968 aired or Replement of Replement Serial No.	or Repairs of B Edtion W68 ced and Repl	Othe Identifi	ments 19 wer GE C omponent er cation able	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
) Hous	Case (b)Applicable (c) Origina Identification  Name of Component	Edition of Section L Construction Code of Components Repa Name of Manufacture General Electric	XI Utilized for ASME III 1968 aired or Replement of Replement Serial No.	or Repairs of B Edtion W68 ced and Repl	Othe Identifi	ments 19 wer GE C omponent er cation able	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
) Hous ) Bolt	Case (b)Applicable (c) Origina  Identification  Name of Component  ing  ing( 8 each)	Edition of Section L Construction Code of Components Repa Name of Manufacture General Electric	XI Utilized for ASME III 1960 aired or Replement Serial No.  See CRD Table op cyc 10/11  Ht No. 72M100	or Repairs of B Edtion W68 ced and Replicational Board No.	Othe Identifi	ments 19 wer GE C omponent er cation able	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
Hous Bolt	Case (b)Applicable (c) Origina  Identification  Name of Component  ing  ing( 8 each)  Description of	Edition of Section Construction Code of Components Repair Name of Manufacture General Electric	XI Utilized for ASME III 1960 aired or Replement Serial No.  See CRD Table op cyc 10/11  Ht No. 72M100	or Repairs of B Edtion W68 ced and Replied National Board No.	Other Identification of the CRD Table of	ments 19 mer GE C  component  er cation  able 1  page 3	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8% 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.



#### FORM NIS-2 (Back) sheet 2 of 3

	3. VT-1 NDE is listed in table CRD op cyc 10/11.	
•		
	CERTIFICATE OF COMPLIANCE	
to th	We certify that the statements made in the report are correct and this <u>replacement</u> repair or replacement	
	Type Code Symbol Stamp None	
	Cartificate of Authorization No. None Expiration Da	ate <u>No</u>
	Signed Sumulu Shaufai codes & Materials, TGL Date 9-26-9	30
	Owner or Owner's Designee, Title	
	CERTIFICATE OF INSERVICE INSPECTION	
, .	he undersigned, holding a valid commaission issued by the Nationel Board of Boiler and Pre	
Inspe	ectors and the State or Province of <u>IOWA</u> and amployed by <u>Hartford Steem Bo</u>	ssure oiler 1
<del>                                    </del>	of Hartford, Connecticut have inspected the components Owner's Report during the period $7-16-90$ to $16-1-90$	
, and	d state that to the best of my knowledge and belief, the Owner has performed examinations and take ares described in the Owner's Report in accordance with the requirements of the ASME Code, Section 1985.	en corre
conce Inspe	y signing this certificate neither the Inspector nor his amployer makes any warranty, expressed erning the examinations and corrective measures described in this Owner's Report. Furthermore, ector nor his amployer shall be liable in any manner for any personel injury or property damage kind arising from or connected with this inspection.	, neith
	Seath Irele Commissions NB 8829(I)(N) 941-IA	
		ovince,
Endo	rsements	•

1.	Owner <u>Iowa Electric Light &amp; Power</u>	Date <u>September 13, 1990</u>
	Nama P.O. Box 351, Cedar Rapids, IA 52406	Sheet <u>3</u> of <u>3</u>
	Address Plant <u>Duame Arnold Energy Center</u>	Unit 1

Name 3277 DAEC Road, Palo, IA 52324

See below, P.O. \$51281 (P.O. KE1069) Address Repair Organ. P.O. No., Job No. etc. Type Code Symbol Stamp \_\_ N/A Work performed by <u>Iowa Electric</u> Authorization No. Name 3277 DAEC Road, Palo, 1A 52324 **Expiration Date** 

Address

Idenfication of System see below

(a) Applicable Const. Code ASME III 1974 Edition, W75 Addenda 1361-2 Code Case (b) Applicable Edition of Section XI Utilized for Repairs or Replacement 1980 W/81

(c) Original Construction Code ASME III 1968 Edition W68 Addenda per GE Construction Quality Requirements 22A2534

Identification of Components Repaired or Replaced and Roplacement 6.

Name of Comp.	Name of Manufac.	Board No.	Other Identif.	Year Built (Rep.)	ASME Code Repaired Replaced or Replacement	Stamped (Yes or No)
CRD Housing	General Electric	None	See Below	1990	Replacement	Yes

#### Table CRD-op cyc 10/11 (class1)

Installation Organization	Manufac. Serial No. (Replacad)	Manufac. Serial No. (Replacement)	Other Identification	Preservice VT-1 Bolting
1044234	S/N A3267	S/N A4549	IR215 (38-11)	ISI #90-50
*PMAR 1044019	S/N A4448	S/N A4018	IR215 (02-19)	ISI #90-36
*PMAR 1044137	S/N A4777	S/N A5075	IR215 (34-15)	ISI #90-291
PMAR 1044030	S/N A4796	S/N A4619	IR215 (10-11)	ISI #90-45
PMAR 1044032	S/N A4016	S/N A4286	IR215 (10-19)	ISI #90-32
PMAR 1044034	S/N A4022	S/N A3994	IR215 (10-27)	ISI #90-46
PMAR 1044036	S/N A3945	S/N A2552	IR215 (10-35)	ISI #90-33
PMAR 1044037	S/N A4591	S/N A8882	IR215 (10-39)	ISI #90-38
PMAR 1044040	S/N A4442	S/N A4493	IR215 (14-15)	ISI #90-39
PMAR 1044063	S/N A3975	S/N A4464	IR215 (22-23)	ISI #90-47
PMAR 1044068	S/N A4539	S/N A8883	IR215 (22-43)	ISI #90-29
PMAR 1044072	S/N A4480	S/N A5623	IR215 (26-19)	ISI #90-48
PMAR: 1044083	S/N A4516	S/N A4291	IR215 (30-23)	ISI #90-41
PMAR 1044090	S/N A3818	S/N A5685	IR215 (34-31)	ISI #90-31
PMAR 1044100	S/N A4549	S/N A3813	IR215 (42-19)	ISI #90-35
PMAR 1044020	S/N A4017	S/N A4525	IR215 (02-23)	ISI #90-44
PMAR 1044101	S/N A4494	S/N A2122	IR215 (42-23)	ISI #90-43
A01953	S/N A4589	S/N A5538	IR215 (18-15)	ISI #90-271
PMAR 1044022	S/N A4562	S/N A2182	IR215 (06-11)	ISI #90-37



	FORM N-2 NPT CERTIFICATE BOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCE As required by the Provision of the ASME Code Rules, Section III, Div. :
	Manufactured for:  Ouane Arnold  Ouane And Address of NPT Certificate Hold  Ouane Arnold  Ouane And Address of New Palo, lowa 52
2. 1	ntification-Certificate Holders's S/N of Part: A5538 Nat'l Bd. No. N
	constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. L. Pet
(k	Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
(c	opplicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 C
J. R	RKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.  (Brief description of service for which component was designed)
as c (The Cert for incl	Sheet 1 tify that the statements in this report are correct and this vessel part or appurt ined in the code conforms to the rules of construction of the ASME Code Section applicable Designed Specification and Stress Report are not the responsibility of the cate Holder for parts. An NPT Certification Holder for appurtenances is responsibility as separate Design Specification and Stress Report if the appurtenance is led in the component Design Specification and Stress Report).
DATE:	5/17 ,19 90 Signed GE-NEBG-NF&CM-QA By SOPQA REPRESENTATIVE
Perti	icate Of Authorization Expires: 6/16/90 Certification of Authorization No.: NPT N-
	CERTIFICATION OF DESIGN FOR APPORTENANCE
Des.	n information on file at GE COMPANY, SAN JOSE, CALIFORNIA
Stres DC22A	ss analysis report on file at <u>GE COMPANY, SAN JOSE, CALIFORNIA</u>
Design	n specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15
Stres	ss analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO
<u>-</u>	CERTIFICATION OF SHOP INSPECTION
insp∷ of	the undersigned, holding a valid commission by the National Board of Boiler and Presctors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LATTE OF NORTH CAROLINA have inspected the part of a pressure vessel described in all Data Report on 5-/7 1990, and state that to the best of my knowledge, the NPT Certificate Holder has constructed this part in accordance with the

Obde Section III.

By signing this certificate, neither the Inspector nor his employer makes any warrance expressed or implied, concerning the part described in the Partial Data Report. Furtherm neiter the Inspector nor his employer shall be liable in any manner for any personal injury or perty damages or a loss of any kind arising from or connected with this inspection.

ATE

National Board, State, Province and

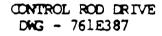
pp mental sheets in form of lists, sketches or drawing may be used provided (1) 3-1/... X 11", (2) information in 1-2 on this Data Report is included on each sheet, each sheet is numbered and number of sheets is recorded in Item 3. "REMARKSS"

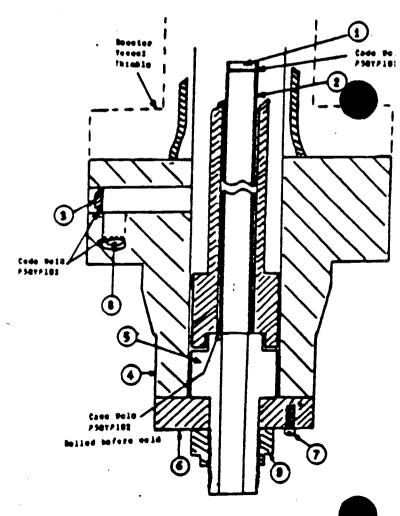
<sup>2</sup> List other intermal or external pressure with conincident temperature when applicable.

### FORM N-2 NPT (ERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCE As required by the Provision of the ASME Code Rules, Section III, Div. I

1.	. Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington	
	(Name and Address of NPT Certification)  (b) Manufactured for: Duane Arnold Palo, Iowa	5224
	(Name and Address of N Certificate Holder for completed	i nucle brig
2.	Identification-Oertificate Holders's S/N of Part: A5538 Nat'	1 Bd. N. N/
	(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared	by D. L. Pet
	(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG00	1
	(C) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case	N207 No. <u>1361-2</u> C
		٠,
		Sheet 2 of 2

- 1. Cap 167A2343P1
   SA182-F304
   3/8 thick X 1 1/16 OD
- 2. Indicator Tube 104B1336P3 SA312-TP316 3/4 sch 40-seamless pipe 0.113 wall thickness 1.065 max. dia.
- 3. Plug 159All76Pl SA182-F304 1/4 thick x 0.812 OD
- 4. Flange 919D610P1 (719E474) SA182-F304 3.37 thick x 9 5/8 OD
- '5. Head 129B3539P3,P5 SA182-F304 3.0 OD x .884 ID
- 6. Ring Flange 114B5122P2 SA182-F304 1 thick x 5.0 OD x 1.75 ID
- 7. Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle
- 3. Plug 175A7961P1 SA182-F304 0.38 thick x 1.307 dia.
- . Nut 114B5460P1 SA193-B8A 1.30 thick x 2.62 dia.





### F(~M H-2 NPT CERTIFICATE BOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by: GE Company, 2117 Castle Rayne Rd., Wilmington, N.C. 28401
Manufastured for: DUANE ARNOLD (Name and Address of NPT Certificate Holder) PALO, IOWA 52324
(Name and Address of N Certificate Holder for completed nuclear componer
2. Identification-Certificate Holders's S/N of Part: A2182 Nat'l Bd. No. N/A
(a) Constructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Peterso
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
N207 (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No.1361-2 Class
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.
(Brief description of service for which component was designed)
Sheet 1 of 2
We certify that the statements in this report are correct and this vessel part or appurtenan
as defined in the code conforms to the rules of construction of the ASME Code Section II
(The applicable Designed Specification and Stress Report are not the responsibility of the N Dertificate Holder for parts. An NPT Certification Holder for appurtmances is responsible
for furnishing a separate Design Specification and Stress Report if the appurtenance is n
included in the component Design Specification and Stress Report).
DATE: 3/30 ,19 90 Signed GE-NEBG-NF&CM-QA By SOO-QA REPRESENTATIVE
(NPT CERTIFICATE HOLGER) > SCO-QA REPRESENTATIVE
Dertificate O. Authorization Expires: 6/16/90 Dertification of Authorization No.: NPT N-115
CERTIFICATION OF DESIGN FOR APPORTENANCE
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M0186-
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO1864
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M0186.  CERTIFICATION OF SHOP INSPECTION  I. the undersigned, holding a valid commission by the National Board of Boiler and Bressyng
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HARBERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M0186.  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR OF STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in this
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M0186.  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR OF STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in this Partial Data Report on Table 2007.
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M0186-  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR of STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in this Partial Data Report on JOSE, and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M0186.  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARIMENT OF LABOR of STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in this Partial Data Report on JOSO 1970, and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.  By signing this certificate, neither the Inspector nor his employer makes any warranty.
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M0186.  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure of STATE OF NORTH CAROLINA have inspected for an analysis report on 1970, and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASMI Code Section III.  By signing this certificate, neither the Inspector nor his employer makes any warranty, neither the Inspector nor his employer makes any warranty, neither the Inspector nor his employer shall be liable in any manner for any personal injury.
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M0186.  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARIMENT OF LABOR of STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in this Partial Data Report on JOSO 1970, and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASME Code Section III.  By signing this certificate, neither the Inspector nor his employer makes any warranty.
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  DC22A6254 Rev. 0.  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M0186.  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure of STATE OF NORTH CAROLINA have inspected for an analysis report on 1970, and state that to the best of my knowledge and belief, the NPT Certificate Holder has constructed this part in accordance with the ASMI Code Section III.  By signing this certificate, neither the Inspector nor his employer makes any warranty, neither the Inspector nor his employer makes any warranty, neither the Inspector nor his employer shall be liable in any manner for any personal injury.

x immental sheets in form of lists, sketches or drawing may be used provided (1) size is X 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3. "REMARKSS"

Items 4-8 Incl.		7.0	minel				
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e. messer (e/		<del></del>		(0)14		1.3	
Location (Top		Crown I	Knuckle Elli	otical Conc	ial Hemisohe	rical flat	Side to Press
Bottom, Enda)	Thickness	Redium	Rediue No	tio Apex	ingle Redi	ue Diameter	conv.or conc
/ - \							
(b)	-						
If removable,	bolts used	i Cono No		Other	restaning		
(b)  If recovable,  7. Jocket Clean	(MBCOETE	1,3000.70.1	, 1.3. 3120	NUMBER)	(Dee	cribe or ettec	h eketch)
B. Daeign Praes					Drop	, if belts, de Weight py Impact mmp. of	erited of match
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						1	(Str. or U)
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teme 11-14 incl 1. Shell: Meter	. to be comp	leted for Hemina Thickr	inner chambe al Co neas in Al	re of jackets erresion llowence in	d vassels, or	chemnels of h	eet exchen
1. Shell: Meter	. to be comp	leted for Hemina Thickr	inner chambe:	re of jackets erresion llowence in	d vassels, or	chemnels of h	eet exchen
l. Shell: Meter (Kin	to be complialT.S.	Hemine Thickr (Min. of Rer	inner chamber al Connect in Al	re of jackets erresion llowencein d)	d vassels, or	channels of h	eet exchen
1. Shell: Meter (Kin 2. Sease: Long Girth	to be complialT.S. d&Spec.Mo.)N.T_	Hemine Thickr (Min. of Res	inner chambe ml Coness_in. Al nge Specified R.T	re of jackets erreeian llowencein d)Efficiencein	od vessels, or	channels of h	rtin.
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1. Shell: Meter (Kin 2. Sease: Long Girth 3. Heade (a) Me Location (a) Top, Bottes, End (b) Channel removable, be) 4. Design precess 6. Sefety Valve 6. Nozzles:	to be completed for the complete for the complete	Heming Thickr (Min. of Rer  Crown Kn Redius Re	inner chamber al Conness in All nge Specifies  R.T.  T.S.  Tucla Ellipt adius Reti  (c)  pei et  pei et	re of jackets erreeian llowencein d)	y vacable, or . Disft y urbee b)Material l Hamispher gle Radius (Descript W Cherpy W at test	channels of r _inLength	rtin.  Side to Proce (Corw.or Corc.)
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1. Shell: Meter (Kin 2. Sease: Long Girth 3. Heade (a) Me Location (a) Top, Bottes, End (b) Channel removable, be)  . Design precess ess bolow to bo . Sefety Valve . Mozzlas:	to be completed for the complete for the complete	Heming Thickr (Min. of Rer	inner chamber al Conness in All nge Specifies  R.T.  T.S.  Tucla Ellipt adius Reti  (c)  pei et  pei et	re of jackets erresion llowencein d) EfficiencNo. of Co( ticel Concis Lo Apex AnOther Fo	y	channels of r _inLength	rtin.  Side to Proce (Conv.or Corc.)  eketch
1. Shell: Meter (Kin 2. Sease: Long Girth 3. Heade (a) Me Location (a) Top, Bottes, End (b) Channel removable, be)  . Dasign precess ess bolow to be . Sefety Valve . Nezzlae: Purposs (Inla-	to be completed for the complete for the complete	Heming Thickr (Min. of Rer	inner chamber al Coness_in, Al nge Specified R.T	re of jackets erresion llowencein d) EfficiencNo. of Co( ticel Concis Lo Apex AnOther Fo	y	channels of r _inLength	rtin.  Side to Proce (Corw.or Corc.)  eketch
1. Shell: Meter (Kin 2. Sease: Long Girth 3. Heads (a) Me Location (a) Top, Bottes, End (b) Channel removable, be) 3. Design precess (eme bolow to bo 3. Sefety Valve 5. Nozzlas: Purposs (Inla-	to be completed for the complete for the complete	Heming Thickr (Min. of Rer	inner chamber al Coness_in, Al nge Specified R.T	re of jackets erresion llowencein d) EfficiencNo. of Co( ticel Concis Lo Apex AnOther Fo	y vascele, or  Disft  y urbee_ b)Material Hemispher gle Radius  Cherry f at tes	channels of r _inLength	rtin.
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1. Shell: Meter (Kin 2. Sease: Long Girth 3. Heede (a) Me Location a) Top, Bottes, End b) Channel removable, be)  . Dasign preceded see bolow to be . Sefety Valve . Nezzlas: Purpose (Inlamoutlat, Drain Openings:	to be completed formulater Number (anholes, No includes,	Crown Kn Redius Re	inner chamber al Coness_in, Al nge Specified R.T	re of jackets erresion llowencein d) EfficienceNo. of Co(cicel Concis Lo Apex AnOther fo	y	chennels of r _inLength	rtin.

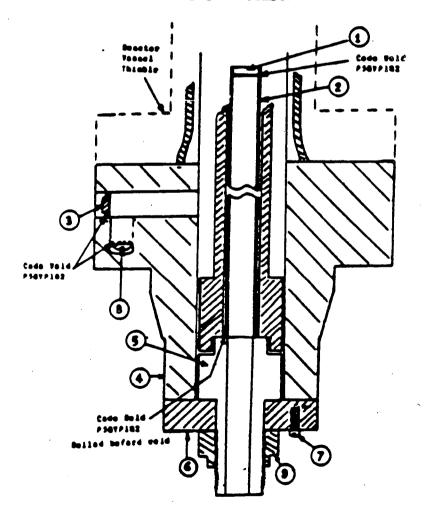
<sup>2</sup> List other internal or external pressure with conincident temperature when applicable.

### FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

•	. Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 28401
	(Name and Address of NPT Certificate Holder)  Manufactured for: DUANE ARNOLD PALO, IOWA 52324
	(Name and Address of N Certificate Holder for completed nuclear component
2.	Identification-Certificate Holders's S/N of Part: A2182 Nat'l Bd. N. N/A
	(a) Constructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Peterson
	(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
	(C) Applicable ASME Code: Section III, Edition 1974, Addenda Dete W'75, Case No. 1361-2 Class
	•
	Sheet 2 of 2

- Cap 167A2343P1
   SA182-F304
   3/8 thick X 1 1/16 OD
- 2. Indicator Tube 104B1336P3
  SA312-TP316
  3/4 sch 40-seamless pipe
  0.113 wall thickness
  065 max. dia.
- 3. ug 159All76Pl SAl82-F304 1/4 thick x 0.812 OD
- 4. Flange 919D610P1 (719E474)SA182-F3043.37 thick x 9 5/8 OD
- 5. Head 129B3539P3,P5 SA182-F304 3.0 OD x .884 ID
- 6. Ring Flange 114B5122P2 SA182-F304 1" thick x 5.0 OD x 1.75 ID
- 7. Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle
- Plug 175A7961P1
   SA182-F304
   0.38 thick x 1.307 dia.
- 114B5460P1 93-B8A 1.30 thick x 2.62 dia.

CONTROL ROD DRIVE DWG - 761E387



# As required by the Provision of the ASME Code Rules, Section III, Div. I

. Manufacture	(Name and Address of N Certificate Holder for completed nuclear por
. Identificat	on-Certificate Holders's S/N of Part: A2122 Nat'l Bd. No. N/1
(a) Construc	ed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Peter
(b) Descript	on of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
	Le ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Cla
	ndard part for use with Reactor. Hydrostatically tested at 1825 psi. min. (Brief description of service for which component was designed)
	Sheet 1 or
s defined in The applicabl Pertificate Ho Tor Turnishing Included in the	the statements in this report are correct and this vessel part or appurted the code conforms to the rules of construction of the ASME Code Section. Designed Specification and Stress Report are not the responsibility of the lider for parts. An NPT Certification Holder for appurtenances is responsible a separate Design Specification and Stress Report if the appurtenance is component Design Specification and Stress Report).
ATE:	3/30 ,19 90 Signed GE-NEBG-NF&CM-QA BY SO-QA REPRESENTATIVE
ertificate Of	Authorization Expires: 6/16/90 Oertification of Authorization No.: NPT N-
	CERTIFICATION OF DESIGN FOR APPORTENANCE
-	ation on file at GE COMPANY, SAN JOSE, CALIFORNIA
	s report on file at GE COMPANY, SAN JOSE, CALIFORNIA
Design specif	cation certified by BJORN HAABERG Prof. Eng. State CAMP. Reg. No. 13.
Stress analys	s report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO
	CERTIFICATION OF SHOP INSPECTION
Inspectors ar of STATE OF Partial Data and belief, Obde Section By signing	this certificate, neither the Inspector nor his employer makes any warrantied companies the part described in the Partial Data Report. Furtherm
	respector nor his employer shall be liable in any manner for any personal injumages or a loss of any kind arising from or connected with this inspection.
	NC 1231  No 1231  National Board, State, Province and

Supplemental sheets in form of lists, sketches or drawing may be used provided (1) si d-1/2" X 11", (2) information in 1-2 on this Data Report is included on each sheet each sheet is numbered and number of sheets is recorded in Item 3. "REMARKSS"

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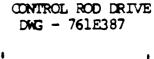
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(b)	halla 190	<del></del>			Other for	tenim		<del></del>	
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End Bucca	s, Tienkoes	Redius	Redius	Retia	Apex Angle	Radius	Diesster	(Conv.or Co	nc.) —
(b)Channel			<del>753 -</del>	<u> </u>	A44 - 6 - 1				
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If Postwold H	est-Treeted.	•						•	

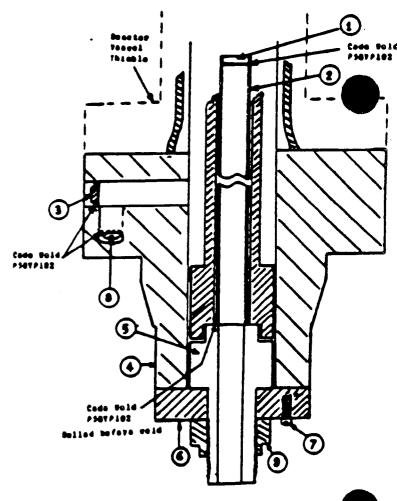
<sup>2</sup> List other internal or external presoure with conincident temperature when applicable.

### As required by the Provision of the ASME Code Rules, Section III, Div. I

Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmingt	
(Name and Address of NPT Certification)  (b) Manufactured for: DUANE ARNOLD PALO, IOWA 52	ite Holder)
(Name and Address of N Certificate Holder for completed	
2. Identification-Certificate Holders's S/N of Part: A2122 Nat'	1 Bd. N. N/A
(a) Constructed According to Drawing No: 761E387G012 Dwg. Prepared	by D. L. Pete
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG00	N207
(C) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case	•••
<del></del>	
	Sheet 2 of 2

- 1. Cap 167A2343P1 SA182-F304 3/8 thick X 1 1/16 OD
- 2. Indicator Tube 104B1336P3 SA312-TP316 3/4 sch 40-seamless pipe 0.113 wall thickness 1.065 max. dia.
- 3. Plug 159All76Pl SA182-F304 1/4 thick x 0.812 OD
- 4. Flange 919D610P1 (719E474)
   SA182-F304
   3.37 thick x 9 5/8 OD
- 5. Head 129B3539P3,P5 SA182-F304 3.0 OD x .884 ID
- 6. Ring Flange 114B5122P2 SA182-F304 . 1" thick x 5.0 OD x 1.75 ID
- 7. Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle
- Plug 175A7961P1
   SA182-F304
   0.38 thick x 1.307 dia.
- Nut 114B5460P1SA193-B8A1.30 thick x 2.62 dia.





# FORM H-2 NPT CERTIFICATE BOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

ctured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 28401
(b) Manufactured for:  Duane Arnold  Duane Arnold  Name and Address of NPT Certificate Holder)  Palo, lowa 52324  (Name and Address of N Certificate Holder for completed nuclear components
Identification-Certificate Holders's S/N of Part: A4525 Nat'l Bd. No. N/A
(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. L. Peterson
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Class
REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.  (Brief description of service for which component was designed)
Sheet 1 of 2 defined in the statements in this report are correct and this vessel part or appurtenance defined in the code conforms to the rules of construction of the ASME Code Section III. The applicable Designed Specification and Stress Report are not the responsibility of the NPT rtificate Holder for parts. An NPT Certification Holder for appurtenances is responsible r furnishing a separate Design Specification and Stress Report if the appurtenance is not cluded in the component Design Specification and Stress Report).
TE: 5/29 ,19 90 Signed GE-NEBG-NF&CM-QA BY (NPT Certificate Holder) SOUGA REPRESENTATIVE
tificate Of Authorization Expires: 6/16/90 Certification of Authorization No.: NPT N-1151
CERTIFICATION OF DESIGN FOR APPORTENANCE
ress analysis report on file at GE COMPANY SAN JOSE CALIFORNIA
ress analysis report on file at GE COMPANY SAN JOSE CALIFORNIA 22A6253 Rev. 0 sign specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570
GE COMPANY, SAN JOSE, CALIFORNIA  Tress analysis report on file at GE COMPANY SAN JOSE CALIFORNIA  22A6253 Rev. 0  sign specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  22A6254 Rev. 1  ress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864
ress analysis report on file at GE COMPANY SAN JOSE CALIFORNIA 22A6253 Rev. 0 sign specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570

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<sup>2</sup> List other internal or external prosours with conincident temperature when applicable.

### FORM N-2 NPT CERTIFICATE BOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

actured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmingt	:co N C 29401
(Name and Address of NPT Certification)  (b) Manufactured for:  Duane Arnold  Palo, Iowa	te Holder) 52324
(Name and Address of N Certificate Holder for completed	nuclear compone :)
Identification-Certificate Holders's S/N of Part: A4525 Nat'	1 Bd. N. N/A
(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared	by D. L. Peters
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG00	
(C) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case	No. 1361-2 Clas 1
	Sheet 2 of 2

- Cap 167A2343P1 SA182-F304 3/8 thick X 1 1/16 OD
- Indicator Tube 104B1336P3 SA312-TP316 3/4 sch 40-seamless pipe wall thickness max. dia.

Plug 159Al176P1 SA182-F304 1/4 thick x 0.812 OD

Flange 919D610P1 (719E474) SA182-F304 3.37 thick x 9 5/8 OD

Head 129B3539P3,P5 SA182-F304 3.0 OD x .884 ID

Ring Flange 114B5122P2 SA182-F304 1" thick x 5.0 OD x 1.75 ID

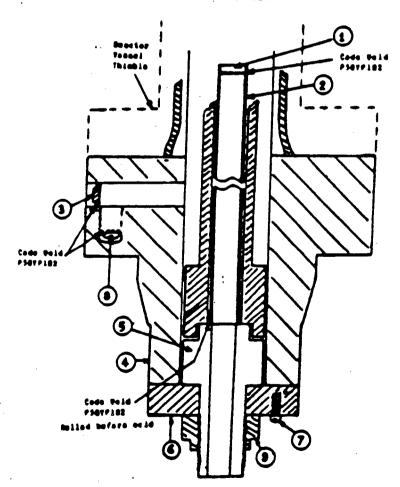
Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle

Plug 175A7961P1 SA182-F304 0.38 thick x 1.307 dia.



1.30 thick x 2.62 dia.

CONTROL ROD DRIVE DWG - 761E387



As required by the Provision of the ASME Code Rules, Section II	enances*
1. Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, (Name and Address of NPT Certificate Rd.)  (b) Manufactured for: Duane Arnold Palo, lowd (Name and Address of N Certificate Holder for completed nucleon)	28 40 24)
2. Identification-Certificate Holders's S/N of Part: A3813 Nat'l Bd.	
(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by	. Peterson
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG(	
(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No.	51-2 Class
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 p  (Brief description of service for which component was designed)	min
We certify that the statements in this report are correct and this vessel part cas defined in the code conforms to the rules of construction of the ASME Code (The applicable Designed Specification and Stress Report are not the responsibil Certificate Holder for parts. An NPT Certification Holder for appurtenances if for furnishing a separate Design Specification and Stress Report if the appurtincluded in the component Design Specification and Stress Report).	of the NPT
DATE: 5/29 ,19 90 Signed GE-NEBG-NF&CM-QA BY NOT CERTIFICATE HOLDER) SOUR RETRE	TATIVE
Dertificate Of Authorization Expires: 6/16/90 Certification of Authorization No.	
CERTIFICATION OF DESIGN FOR APPORTENANCE	
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA	
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA DC22A6253 Rev. 0	
Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. ReDC22A6254 Rev. 1	
Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Re-	15. <u>4018646</u>
CERTIFICATION OF SHOP INSPECTION	
I, the undersigned, holding a valid commission by the National Board of Boiler Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTS of STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described belief, the NPT Certificate Holder has constructed this part in accordance to Code Section III.  By signing this certificate, neither the Inspector nor his employer makes an expressed or implied, concerning the part described in the Partial Data Report. neither the Inspector nor his employer shall be liable in any manner for any person property damages or a loss of any kind arising from or connected with this inspector property damages or a loss of any kind arising from or connected with this inspector property damages or a loss of any kind arising from or connected with this inspector.	included ASME
ATE S-29,1990 June Perus N.C. 123/ ASpector's Signature National Board, State, Pro	

Supplemental sheets in form of lists, sketches or drawing may be used provided (18- ?" X Il", (2) information in 1-2 on this Data Report is included on each sheeta. sheet is numbered and number of sheets is recorded in Item 3. "REMARKSS"

Second Completed for tube sections.   Dia.   Thickness in. Attechment (Kind of Spec. No.) (Subj.to Proce.)   (Welded, Bol.)   Floating. Notarial   Dia.   Thickness in. Attachment inches   In	and And Incl. to be o	ompleted for sino	le well vesse	le jeckete v	essels, or	shelle of	at exchange
(Kind & Spec.Ne) (Him. offlerop Specified)  5. Seese: Long N.T.1 R.T. Ne. of Courses  Girth M.T.1 R.T. Ne. of Courses  Girth M.T.1 I.S. R.T. Ne. of Courses  Girth M.T.1 I.S. R.T. Ne. of Courses  Execution (Top Crown Knuckia Elliptical Concial Heatspherical Flat Side to F Betton, Ende) Thickness Redius Redius Redius Redius Offseet: (conv. of (e) II resoveble, belts used (material, Spec.Ne., 1.S. Size Number)  7. Jackot Closuror (Describe as opes and weld, ber, etc. If ber give dissentions, if belts, cracribe er of Drop Veight (Describe as opes and weld, ber, etc. If ber give dissentions, if belts, cracribe er of Drop Veight (Describe as opes and weld, ber, etc. If ber give dissentions, if belts, cracribe er of Drop Veight (Describe as opes and weld, ber, etc. If ber give dissentions, if belts, cracribe er of Drop Veight (Describe as opes and weld, ber, etc. If ber give dissentions, if belts, cracribe er of Drop Veight (Describe as opes and weld, ber, etc. If ber give dissentions, if belts, cracribe er of Drop Veight (Describe as opes and weld, ber, etc. If ber give dissentions, if belts, cracribe er of temp. er Chercy Impact (Richard Pressure 2 1250) osi at 575 F Charpy Impact (Richard Pressure 2 1250) osi at 575 F Charpy Impact (Richard Pressure 2 1250) osi at 575 F Charpy Impact (Richard Pressure 2 1250) osi at 575 F Charpy Impact (Richard Pressure 2 1250) osi at 575 F Charpy Impact (Richard Pressure 2 1250) osi at 575 F Charpy Impact (Richard Pressure 2 1250) osi at 575 F Charpy Impact (Richard Pressure 2 1250) osi at 675 F Charpy Impact (Richard Pressure 2 1250) osi at 675 F Charpy Impact (Richard Pressure 2 1250) osi at 675 F Charpy Impact (Richard Pressure 2 1250) osi at 675 F Charpy Impact (Richard Pressure 2 1250) osi at 675 F Charpy Impact (Richard Pressure 2 1250) osi at 675 F Charpy Impact (Richard Pressure 2 1250) osi at 675 F Charpy Impact (Richard Pressure 2 1250) osi at 675 F Charpy Impact (Richard Pressure 2 1250) osi at 675 F Charpy Impact (Richard Pressure 2 1250) osi at 675 F Charpy Impact (Ri		Momin	L Co	roeion	24		···
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Social Incidence Redius Redius Redius Apex Angle Redius Olsest: (conv.ar (a) (b) 17 resovable, belts used (Redrial, Spec.Re., T.S. Size Number) (Describe or ettach sketch)  Jackot Closurer (Describe as opec and weld, ber.etc. If ber give dismessions, if belts, c.acribe or a Drop Welght (Describe as opec and weld, ber.etc. If ber give dismessions, if belts, c.acribe or a Drop Welght (Describe as opec and weld, ber.etc. If ber give dismessions, if belts, c.acribe or a Drop Welght (Describe as opec and weld, ber.etc.) (Releght of the setting o	Location (Top	Crown Knur	±le Elliptica	l Conciel	Hasiapheric	cal Flat	Side to Pres
Tresoveble, belts used	Bottom, Ende) Thickne	ree Radius Radi	ue Retie	Apex Angle	Radius	Diamet: :	(conv.at cond
(Describe as open and wald, ber, etc. If ber give dimensions, if balts, cuscribe er a Drop Veignk	<u>•)</u>						
(Describe as open and wald, ber, etc. If ber give dimensions, if balts, cuscribe er a Drop Veignk	If removable, belte us			Other feet	ning (Donne)		
(Describe as ages and weld, ber, etc. If her give dissensions, if belts, cuscribe er a Drop Weight.  Design Pressure 2 1250 pai at 575 % Cherpy Impact related temp. ef ef et temp. ef ef et temp. ef ef et temp. ef ef et temp. ef ef et temp. ef ef ef et temp. ef ef ef et temp. ef ef ef ef ef ef ef ef ef ef ef ef ef							
and 10 to be completed for tube sections.  Tube Sheets: Stetionary Net'l	(Descri						
and 9 and 10 to be completed for tube sections.  Tube Sheets: Stetionary Net'l	Design Pressure 2	1250	pei at 5	75 <b>4</b>	Charpy	1 spect	m-16
Tube Sheets: Stetionary Met'l.				·	at temp	. ef	•r
Tube Sheets: Stetionary Met'l. Dis. Thickness in. Attachemic (Kind of Spec. No.) (Subj.to Prees.) (No.)  Fleating. Material Dis. Thickness in. Attachemic inches of Material O.D. in. Thickness er gags. Mumber Type (Str. or U)  Tubes: Moterial O.D. in. Thickness er gags. Mumber Type (Str. or U)  The li-14 incl. to be completed for inner chambers of Jacketed vessels, or chemels of nest exchanged the incl. Shell: Material T.S. Thickness in. Allowers in. Dis. ft. in_Lengt: ft. in. (KindáSpec.No.) (Min.ofRenge Specified)  Sessa: Long M.T. R.T. Efficiency & Girth M.T. R.T. No. of Courses  Needs (c) Material T.S. (b)Material f.S. (consist)  Maded (c) Material T.S. (b)Material for Side to Follow the State of Material Thickness Radius Radius Ratis Apex Angle Radius Disseter (Conv. or C. fnd Drop Weight (Conv. or C. fnd Drop Weight (Charpy Import The Charpy Import The Charpy Import The Charpy Import The Charpy Import The State Thickness Import The State Thickness Material Attach Outlet, Orain) Number Sia or Size Type Material Thickness Material Attach Outlet, Orain) Number Sia or Size Location (Describe Material Attach Openings: Mandles, No. Size Location (Describe Material Attach Openings: Mandles, No. Size Location (Describe Material Attach Openings: Mandles, No. Size Location (Describe Material Attach Openings: Mandles, No. Size Location (Describe Material Attach Openings: Mandles, No. Size Location (Describe Material Attach Openings: Mandles, No. Size Location (Describe Material Attach Openings: Mandles, No. Size Location (Describe Material Attach Openings: Mandles, No. Size Location (Describe Material Attach Openings: Mandles, No. Size Location (Describe Material Attach Openings: Mandles, No. Size Location (Describe Material Mandles, No. Size Location (Describe Material Mandles, No. Size Location (Describe Material Mandles, No. Size Location (Mandles,	ags 9 and 10 to be com	pleted for tube a	ections.				
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New York   Correction   New York   New Yor			•			(	Str. or U)
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Purpose (Inlat Outlet, Orain) Number Size Location    Describe of attach   Drop Weight   Cherry Impact   Cherr	End	m Redius Rediu	e Retie	Apex Angle	Redius	Dissetar	(Conv. or Conc.
(Describe or attern skatch Drop Weight Charpy Impect Response to be completed for all vessels where applicable.  Sofaty Velve Outlate: Number Size Location  Mozziaa: Purpose (Inlat Outlet, Orain) Number Sia or Size Location  Inspection Menholes, No. Size Location  Location  Location  Location  Location		(a) (b)	- (c)	Other Feeton	ina		<del></del>
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Design prossure2			•		•		n-1b
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Purpose (Inlat Outlet, Orein) Number Size Type Metarial Thickness Material Attac	Marriage				. ^		
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Openings: Hendlee, NoSizeLacetion	Outlet, Orain) N	mber Sia or S	tee Type	Material Ti	hickness	Material	Attached
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upporter Shirt Lege Lege Other Attached	upporter Shirt	l ann	مجم ا	ALL.	-	Attacked	

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List other internel ar externel pressure with conincident temperature when applicable.

# FORM N-2 No CERTIFICATE BOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTS As a quired by the Provision of the ASME Code Rules, Section III, D.

Manufactured & OP dified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C.

(Name and Address of NPT Certificate Hold (b) Manufactured Palo, Iowa 52

Name and Address of N Certificate Holder for completed nuclea

2. Identification—Certificate Holders's S/N of Part: A3813 Nat'l Bd. N

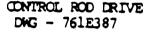
(a) Constructed Acording to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. 1

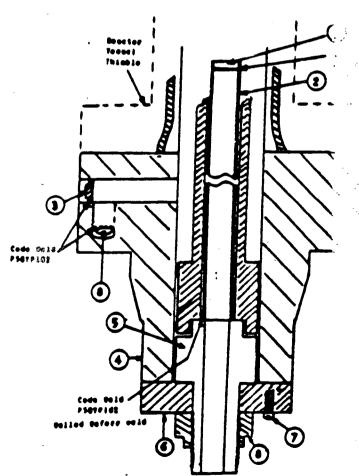
(b) Description of Fart Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001

(C) Applicable ASM: Code: Section III, Edition 1974, Addenda Date W'75, Case No. 136

Sheet 2

- Cap 167A2343P1
   SA182-F304
   3/8 thick X 1 1/15 00
- 2. Indicator Tube 1:81336P3
  SA312-TP316
  3/4 sch 40-seamles pipe
  0.113 wall thick ss
  1.065 max. dia.
- 3. Plug 159All76Pl SA182-F304 1/4 thick x 0.81% 00
- 4. Flange 919D610P1 (719E474) SA182-F304 3.37 thick x 9 5/ OD
- 5. Head 129B3539P3,F SA182-F304 3.0 CD x .884 ID
- 6. Ring Flange 114B5 (2P2 SA182-F304
- 1" thick x 5.0 00 . 1.75 ID
- 7. Cap Screw 117C45 :: 22 SA193-B6 6 ea. 1/2 dia. on '1/8 bolt circle
- 3. Plug 175A7961P1 SA182-F304 0.38 thick x 1.30% lia.
- ). ut 114B5460P1 SA193-B8A 1.30 thick x 2.62 da.





actured & Certified by: GE Company, 2117 Castle Havne Rd., Wilmington, N.C. 28401  (b) Manufactured for: Duane Arnolde and Address of NPT Certificate College Name and Address of N Certificate Holder for complete: Climate College Name and Address of N Certificate Holder for complete: Climate College Name and Address of N Certificate Holder for complete: Climate Component)  Identification-Certificate Holders's S/N of Part: A5685 Nat'l. No. N/A  (a) Onstructed According to Drawing No: 7618787012 Rev 21 Dag. Prepared D. L. Peterson  (b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 780. 1001  (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Climate Distriction of Service for Which Component Was Certified Escription of Service and this vessel of Page Certification Holder for appurtman Service in Which Certificate Escription and Stress Report if the Certified Escription Escription and Stress Report if the Certified Escription Escription and Stress Report if the Certified Escription Escription and Stress Report if the Certified Escription Escription of Authorization Escription Escription and Stress Report if the Certified Escription Escription of Service Escription of Service Escription of Service Escription of Service Escription of Service Escription of Service Escription of Service Escription of Service Escription of Service Escription Escription Service Escription Service Escr	As required by the Provision of the ASME Code Rules, Section	PORTENANCES* II, Div. I
(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared D. L. Peterson  (b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RD 3001  (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, C.3e 3.1361-2 Class 1  REMARKS: Standard part for use with Reactor. Hydrostatically tested at psi. min.  (Frief description of service for which Component Was C.3. add)  (c) Applicable ASME Code: Section III. Pedition 1974, Addenda Date W'75, C.3e 3.1361-2 Class 1  REMARKS: Standard part for use with Reactor. Hydrostatically tested at psi. min.  (Frief description of service for which Component Was C.3. add)  (c) Applicable Designed Specification and Stress Report are not the resp. lity of the NTT critificate Holder for parts. A NPT Certification Holder for appurtenary is responsible of furnishing a separate Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification of Authorization is report REMARKS: SPECIFICATION OF DESIGN FOR APPORTRINGS  (REMIFICATION OF DESIGN FOR APPORTRINGS)  (CERTIFICATION OF DESIGN FOR APPORTRINGS)  (c) Application certified by EMARD YOSHIO Prof. Eng. State CAL 1. g. No MO18646  (CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of and ressure professor and professor of the State or Province of NORTH CROUDNA and employed by STATE OF NORTH CROUDNA have inspected the part of a pressure was TIDED TO THIS STATE OF NORTH CROUDNA have inspected the part of a pressure was TIDED TO THIS STATE OF NORTH CROUNNA have inspected the part of a pressure was TIDE	actured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmingson.  (b) Manufactured for: Duane Arnold Palo, I GWE  (Name and Address of N Certificate Holder for completed of the company of the compan	N.C. 28401 Folder 52324 Clear component)
(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared D. L. Peterson  (b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RD 3001  (c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, C.3e 3.1361-2 Class 1  REMARKS: Standard part for use with Reactor. Hydrostatically tested at psi. min.  (Frief description of service for which Component Was C.3. add)  (c) Applicable ASME Code: Section III. Pedition 1974, Addenda Date W'75, C.3e 3.1361-2 Class 1  REMARKS: Standard part for use with Reactor. Hydrostatically tested at psi. min.  (Frief description of service for which Component Was C.3. add)  (c) Applicable Designed Specification and Stress Report are not the resp. lity of the NTT critificate Holder for parts. A NPT Certification Holder for appurtenary is responsible of furnishing a separate Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification and Stress Report if the component Design Specification of Authorization is report REMARKS: SPECIFICATION OF DESIGN FOR APPORTRINGS  (REMIFICATION OF DESIGN FOR APPORTRINGS)  (CERTIFICATION OF DESIGN FOR APPORTRINGS)  (c) Application certified by EMARD YOSHIO Prof. Eng. State CAL 1. g. No MO18646  (CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of and ressure professor and professor of the State or Province of NORTH CROUDNA and employed by STATE OF NORTH CROUDNA have inspected the part of a pressure was TIDED TO THIS STATE OF NORTH CROUDNA have inspected the part of a pressure was TIDED TO THIS STATE OF NORTH CROUNNA have inspected the part of a pressure was TIDE	. Identification-Certificate Holders's S/N of Part: A5685 Nat 1	1. No. N/A
(c) Applicable ASME Ode: Section III, Edition 1974, Addenda Date W'75, Care 1,1361-2 Class 1  REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1,1361-2 Class 1  (Erief description of service for which component was 0.51 ed)  (Erief description of service for which component was 0.51 ed)  (Erief description of service for which component was 0.51 ed)  (Erief description of service for which component was 0.51 ed)  (Erief description of service for which component was 0.51 ed)  (Erief description of service for which component was 0.51 ed)  (Erief description of service for which component was 0.51 ed)  (Erief description of service for which component was 0.51 ed)  (Erief description of service for which component was 0.51 ed)  (Erief description of service for which component was 0.51 ed)  (Erief description and Stress Report of the NST interpretation of the NST inter		
RPMARKS: Standard part for use with Reactor. Hydrostatically tested at 10 psi, min.  (Frief description of service for which component was component to the rules of construction of the April 1982 of appurtenance of appurtenance is defined in the component besign specification and Stress Report if the component pesign specification and period is component pesign specification and stress Report if the component pesign specification and stress Report if the component pesign specification and stress Report if the component pesign specification and stress Report if the component pesign specification and stress Report if the component pesign specification and stress Report if the component pesign specification and stress Report if the component pesign specification and stress Report if the component pesign specification and stress Report if the component pesign specification and stress Report if the compo		
Sheet 1 of 2 certify that the statements in this report are correct and this vessel or appurtenance is defined in the code conforms to the rules of construction of the Asi is Section III. he applicable Designed Specification and Stress Report are not the responding to the NPT certificate Holder for parts. An NPT Certification Holder for appurtenance is responsible or furnishing a separate Design Specification and Stress Report if the conformation of the Asi is responsible or furnishing a separate Design Specification and Stress Report if the conformation cluded in the component Design Specification and Stress Report.  TE: 5/29 ,19 90 Signed CE-NESCH-QA BY STATE OF Authorization Expires: 6/16/90 Certificate Holder)  CERTIFICATION OF DESIGN FOR APPURTENANCE  esign information on file at GE COMPANY, SAN JOSE, CALIFORNIA  tress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  tress analysis report certified by BUGN HAABERG Prof. Eng. State CAL. G. No. 15570  CERTIFICATION OF SECO INSPECTION  I, the undersigned, holding a valid commission by the National Board of the State or Province of NORTH CAROLINA and employed by MENT: LABOR STATE OF NORTH CAROLINA have inspected the part of a pressure vesse Tibed on this intal Bata Report on State of Province of NORTH CAROLINA and employed by MENT: LABOR Intal Bata Report on State of S		o. <u>1361-</u> 2 Class 1
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tress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  tress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  cz22A6253 Rev. 0 esign specification certified by BJORN HAABERG Prof. Eng. State CAL 9. No. 15570  cz2A6254 Rev. 1 tress analysis report certified by EDWARD YOSHIO Prof. Eng. State CAL 9. No. M018646   CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of 1. and 1. essure inspectors and/or the State or Province of NORTH CAROLINA and employed by MENT LABOR STATE OF NORTH CAROLINA have inspected the part of a pressure vesse 1. Tibed in this internal Data Report on 1. 5-29 1990, and state that to the b. in my k wledge in the Section III.  By signing this certificate, neither the Inspector nor his employer missing k with he ASME section implied, concerning the part described in the Partial Data Report on 1. Second 1. Injury pressed or implied, concerning the part described in the Partial Data Report 1. Second 1. Injury property damages or a loss of any kind arising from or connected with the spection.  5-29 1990 Angular Concerning from or connected with the spection.  5-29 1990 Angular Concerning from or connected with the spection.		.: NP: N-1151
tress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  C22A6253 Rev. 0 esign specification certified by BJORN HAABERG Prof. Eng. State CAL S. g. No. 15570  C22A6254 Rev. 1 tress analysis report certified by EDWARD YOSHIO Prof. Eng. State CAL S. g. No. M018646  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of and essure inspectors and/or the State or Province of NORTH CAROLINA and employed by MENT LABOR INTIGHT TO INTIGHT OF NORTH CAROLINA have inspected the part of a pressure vesser TIDED in this intight of the NPT Certificate Holder has constructed this part in accordance with the ASME and Section III.  By signing this certificate, neither the Inspector nor his employer many warranty, pressed or implied, concerning the part described in the Partial Data Report or inspection or his employer shall be liable in any manner for an inspection.  5-29 1990 Anama P. C. 1231  Aspector's Signature National Board, State ONLO.		}
esign specification certified by BJORN HAABERG Prof. Eng. State CAL F. g. No. 15570 C22A6254 Rev. 1 tress analysis report certified by EDWARD YOSHIO Prof. Eng. State CAL F. g. No. M018646  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of S. and Sessure inspectors and/or the State or Province of NORTH CAROLINA and employed by MENT LABOR STATE OF NORTH CAROLINA have inspected the part of a pressure vesse Tibed in this intial Data Report on 5-29 1990, and state that to the being k wiledge in delete, the NPT Certificate Holder has constructed this part in accordance with the ASME in the Section III.  By signing this certificate, neither the Inspector nor his employer makes any we cranty, pressed or implied, concerning the part described in the Partial Data Report Furthermore, wither the Inspector nor his employer shall be liable in any manner for an inspection.  5-29,1990 Angular Concerning from or connected with the improperty damages or a loss of any kind arising from or connected with the improperty damages or a loss of any kind arising from or connected with the improperty damages or a loss of any kind arising from or connected with the improperty damages or a loss of say kind arising from or connected with the improperty damages or a loss of say kind arising from or connected with the improvement of the par	tress analysis report on file at CF CMDANY CAN TOSE CALIBORIA	
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$\cdot$	ither the Inspector nor his employer shall be liable in any manner for an improperty damages or a loss of any kind arising from or connected with the	sonal njury
	E Aspector's Signature National Board, State	ovinc and No.

pplemental sheets in form of lists, sketches or drawing may be used provided. 1) sits is 1/2" V 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) is numbered and number of sheets is recorded in Item 3. "REMARKS."

Premovable, belts used (s)   (b)   (c)   Other factoning   (Describe or strach sketch   Orop Weight   Cherpy Lapact   Pt.     Design pressure2	Items 4-8 Incl. to be c	peoleted for singl		le, jeckete v	secols, or	shells of he	et exchanger
S. Segment Long   Ki.i.   Ki.i	A Challe Material	T. C. Thicks	LL CO	108107	Dia (t	10 1	
Girth N.T. R.T. Me. of Courses  6. Needes: (a) Netorial I.S. (b)Netorial I.S.  Location (Top Crown Knuckle Ciliptical Cencial Healspherical Flat Side to Pro Bettse, (nde) Thickness Redium Redium Retir Apax Anglo Redium Dismeter (conv.or co (a)  (a) (b) (exterial, Spec.No., I.S. Size Number) (Describe or stach serich)  7. Jacket Closures  (Checribe os opes and weld, bar, etc. [f bor give dismessions, if buits, describe or and Drop Vesion of Course (Checribe or opes and serich)  8. Design Francure 2 1250 psi ot 575 W Charry Lepect [F.1b of temp, of eff  1 Less 7 and 10 to be completed for two sections.  9. Tube Sheete: Stationary Net*1. Dis. Thickness in Attachment  (Kind of Spec. No.) (Subj.ta Prose.)  Fleating, Material  O.D., in. Thickness er gags. Number Type  (Siz. er U)  tems [1-14 incl. to be completed for inner chambers of locksted vessels, or channels of heat suchanges  Nessinal Corrector  (Kind-Spec.No.) (Min. of Renge Spec.led)  11. Shell: Material T.S. Thickness in Allowance in Dis. ft. in Length ft. in.  (Kind-Spec.No.) (Min. of Renge Specified)  2. Seesan Long N.T. S. (Subjects] Inside Disease (Conv.or Con  (Kind-Spec.No.) (Min. of Renge Specified)  7. S. (B)Netorial T.S. (B)Netorial T.S.  (B)Netorial T.S. (B)Netorial T.S.  (Kind-Spec.No.) (Min. of Renge Specified)  7. Seesan Long N.T. S. (B)Netorial T.S.  (B)Netorial T.S. (B)Netorial T.S.  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Ft. Side to Fre (Calley)  (Calley, Retire, Ft. Side to Ft. Side to Ft. Side to Ft.	(Kind A	Com Ma) (Min a/9	laces Committe				
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Location (Top Bottes, Ende) Thickness Radius Radius Ratio Apex Anglo Radius Disseter (conv.or co. (a)  (a)  (b)  (internal, Spec.Ne., T.S. Size Number)  (internal, Spec.Ne., T.S. Size Number)  7. Jacket Closurer  (Paccribe as open and weld, ber, etc., If bor give dissensions, If helits, describe or she completed for tube sections,  8. Design Pressure 2 1250 pai ot 575 Tobers Internal Int	Girth	N.T.1	R	.T	No. of C	Ourses	
battes_Ende) Thickness Radius Radius Ratie Apex Anglo Radius Disseter (conv.or co. (a) (b) If reservable, belts used	6. Heeds: (s) Metorisi		1.5	(b)Motorial		1.5	
(a)  If removable, boits used	Location (Top	Crown Knuc	kle Elliptic	al Concial	Hemispheric	el Flat	Side to Pre
If removable, bolts used		ee Radius Radi	us Astio	Apex Anglo	Redius	Diemeter	.co 10. vncc)
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(tescribe as ogue and weld,ber,etc. If bor give disensions, if balts, describe or and Drop Velgat.  8. Design Prassure 2 1250 pai ot 575 W Cherpy legact nt-lab et temp. of et temp. of et temp. of et temp. of et temp. of et temp. of et temp. of et temp. of et temp. of et temp. of et temp. of et temp. of et temp. Olds.  9. Tube Sheete: Stationary Net'l. Dlas. Thickness in. Attachment.  Fleating. Material Dlas. Thickness in. Attachment.  Inches  10. Tubes: Rotarial Dlas. Thickness er gage. Namber Type (Str. er U)  Itsms 11-14 incl., to be completed for inner chambers of lacteted vessels, or channels of heet exchanger (KandáSpec.Ne.) (Min. ofRenge Specified)  12. Seesar Long H.T. R.T. Efficiency Solith M.T. R.T. No. of Courses  12. Seesar Long H.T. R.T. No. of Courses  13. Head (a) Natorial Crom Krucie Clistical Apex Angle Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater (Conv. er Confede) Redius Dissater Redius Redius Dissater Redius Dissater Redius Redius Dissater Redius Dissater Redius Redius Dissater Redius Redius Dissater Redius Dissater Redius Redius Dissater Redius Redius Dissater Redius Redius Dissater Redius Redius Dissater Redius Redius Dissater Redius Redius Dissater Redius Redius Dissater Redius Redius Redius Redius Redius Dissater Redius Redius Dissater Redius Redius Redius Redius Redius Redius Dissater Redius Redius Dissater Redius Redius Redius Redius Redius Dissater Redius Redius Redius Redius Redius Dissater Redius Redius Redius Redius Dissater Redius Redius Redius Dissater Redius Redius Redius Dissater Redius Rediu	If removable, boits us	ed	S. Size Number	Other feets  c)	ning(Descri)	o er ettech	sketch)
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Tibes 9 and 10 to be completed for tube sections.	8. Deeign Preseuro 2	1250	pei ot	75 <b>=</b>	Cherpy 1	epect	R-16
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Coresion   Newtree   Coresion   Newtree   Coresion   Newtree   Newtree   Coresion   Newtree   Coresion   Newtree   Coresion   Newtree   Coresion   Newtree	10. Tubes: Hoterial	0.0	in. Thickness	er gage	. Nasber_	T ype	
New York   New York						(\$	Str. er U)
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Outlet, Drain) Number Die er Slam Type Meterial Thickness Noterial Attache  . Inspection Menhales, Re. Siam Location Openinge: Handles, We. Size Location Threaded, No. Size Location . Supporte: Shirt Luge Other Attached	6. Mazzlee:					•	
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	(Yee	e Ma)	- V-				re & How)

<sup>2</sup> List other internal or external pressure with conincident temperature when applicable.

#### FORM N-2 NPT CERTIFICATE BOLDERS' DATA REPORT FOR NUCLEAR PART AND APPOR WCBS\* As required by the Provision of the ASME Code Rules, Section III, /. I factured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N. 28401 (Name and Address of NPT Certificate Ho) Duane Arnold Palo, Iowa (b) Manufactured for: Name and Address of N Certificate Holder for completed nucle component; . Identification-Certificate Holders's S/N of Part: A5685 Nat'l Bd. N/A (a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. Peterson (b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001 (C) Applicable ASME Obde: Section III, Edition 1974, Addenda Date W'75, Case No. 1 2 Class 1

- Cap 167A2343P1
   SA182-F304
   3/8 thick X 1 1/16 00
- SA312-TP316
  3/4 sch 40-seamless pipe
  3 wall thickness
  5 max. dia.
- . Plug 159All76Pl SA182-F304 1/4 thick x 0.812 OD
- Flange 919D610P1 (719E474) SA182-F304 3.37 thick x 9 5/8 OD

Head 129B3539P3,P5 SA182-F304 -3.0 OD x .884 ID

Ring Flange 114B5122P2 SA182-F304 1" thick x 5.0 OD x 1.75 ID

Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle

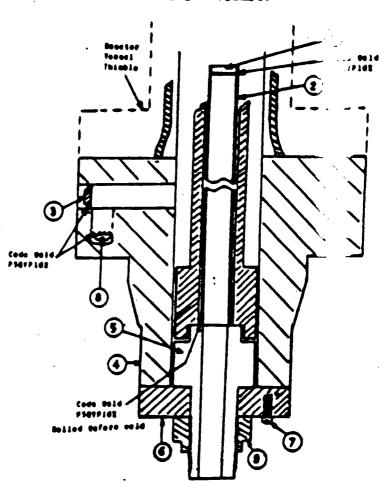
Plug 175A7961P1 SA182-F304 0.38 thick x 1.307 dia.

4B5460P1 SA195-B8A

1.30 thick x 2.62 dia.

CONTROL ROD DRIVE DWG - 761E387

Sheet f 2



FORM	M-2	NPT	CERTI	FIC	VIB :	BOLDERS'	DATA	REP	RT I	POR NO	CLEAR	PART	AND	APPUR!	PNANC	Z
	Αs	rec	nuired	by	the	Provision	on of	the	ASMI	E COOR	Rules	s, Sec	tion	III,	Div.	I

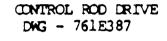
1. Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 284
1. Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 284  (b) Manufactured for:    Duane Arnold   Duane Arnold   Palo, loward 52
(Name and Address of N Certificate Holder for completed nuclear
2. Identification-Certificate Holders's S/N of Part: A4291 Nat'l Bd. No. N.
(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. L. Pete
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 C
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.  (Brief description of service for which component was designed)
Sheet 1 c
as defined in the code conforms to the rules of construction of the ASME Code Section (The applicable Designed Specification and Stress Report are not the responsibility of the
Certificate Holder for parts. An NPT Certification Holder for appurtenances is response
for furnishing a separate Design Specification and Stress Report if the appurtenance i included in the component Design Specification and Stress Report).
DATE: 5/17 ,19 90 Signed GE-NEBG-NF&CM-OA BY
DATE: 5/17 ,19 90 Signed GE-NEBG-NF&OM-QA BY SON QA REPRESENTATIVE
Certificate Of Authorization Expires: 6/16/90 Certification of Authorization No.: NPT N-
CERTIFICATION OF DESIGN FOR APPORTENANCE
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA
Design intolnation on life at GE COPPANI, SAN JOSE, CALIFORNIA
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA
Stress analysis report on file at <u>GE COMPANY, SAN JOSE, CALIFORNIA</u> DC22A6253 Rev. 0 Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15
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Stress analysis report on file atGE_COMPANY, SAN JOSE, CALIFORNIA DC22A6253 Rev. 0  Design specification certified byBJORN HAABERGProf. Eng. State CALIF. Reg. No. 15  DC22A6254 Rev. 1  Stress analysis report certified byEDWARD YOSHIOProf. Eng. State CALIF. Reg. No. MO.  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Press Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF Lofe STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in the Partial Data Report on5-/7_19 %, and state that to the best of my knowled and belief, the NPT Certificate Holder has constructed this part in accordance with the Partial Data Report on5-/7_19 %.
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15  DC22A6254 Rev. 1  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Press Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF L. of STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in the Partial Data Report on 5-/7 19 %, and state that to the best of my knowled and belief, the NPT Certificate Holder has constructed this part in accordance with the ACO Code Section III.
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15  DC22A6254 Rev. 1  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Press Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF Light of STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in the Partial Data Report on S-/7 19 %, and state that to the best of my knowled and belief, the NPT Certificate Holder has constructed this part in accordance with the 10 Code Section III.  By signing this certificate, neither the Inspector nor his employer makes any warrar expressed or implied, concerning the part described in the Partial Data Report. Furthermy
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15  DC22A6254 Rev. 1  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Press Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF Lo  of STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in the Partial Data Report on 5-/7 19 %, and state that to the best of my knowle and belief, the NPT Certificate Holder has constructed this part in accordance with the 10 Code Section III.  By signing this certificate, neither the Inspector nor his employer makes any warrar
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Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15  DC22A6254 Rev. 1  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Press Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARIMENT OF L. of STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in the Partial Data Report on 5-/7 19 %, and state that to the best of my knowle and belief, the NPT Certificate Holder has constructed this part in accordance with the ACO Code Section III.  By signing this certificate, neither the Inspector nor his employer makes any warrar expressed or implied, concerning the part described in the Partial Data Report. Furtherm neither the Inspector nor his employer makes any warrar expressed or implied, concerning the part described in the Partial Data Report. Furtherm neither the Inspector nor his employer shall be liable in any manner for any personal initial contents.
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA DC22A6253 Rev. 0 Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15 DC22A6254 Rev. 1 Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO  CENTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Press Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF Liver of STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in the Partial Data Report on 5-/7 19 %, and state that to the best of my knowle and belief, the NPT Certificate Holder has constructed this part in accordance with the construction of implied, concerning the part described in the Partial Data Report. Furtherm neither the Inspector nor his employer makes any warrar expressed or implied, concerning the part described in the Partial Data Report. Furtherm neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damages or a loss of any kind arising from or connected with this inspection.  5-/7 ,1990
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15  DC22A6254 Rev. 1  Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO  CERTIFICATION OF SHOP INSPECTION  I, the undersigned, holding a valid commission by the National Board of Boiler and Press Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF Light STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in the Partial Data Report on 5-/7 1970, and state that to the best of my knowle and belief, the NPT Certificate Holder has constructed this part in accordance with the 100 Code Section III.  By signing this certificate, neither the Inspector nor his employer makes any warrar expressed or implied, concerning the part described in the Partial Data Report. Furtherm neither the Inspector nor his employer shall be liable in any manner for any personal injuor property damages or a loss of any kind arising from or connected with this inspection.

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Girt	h	<b>*</b> ,1	.1		R. J.		Ma. o	f faurass		
Girt 6. Heede: (a)	Meteriel		1.5		(b)Mo	terial_		1.5		
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Bottom, Ende)	Mickness	Red Lue	Red i ue	Not in	Ape x	Angle	Radio	Diese	ter (c	SOUA '95 C
(4)										
If recovable,	No.120					feeten	100			
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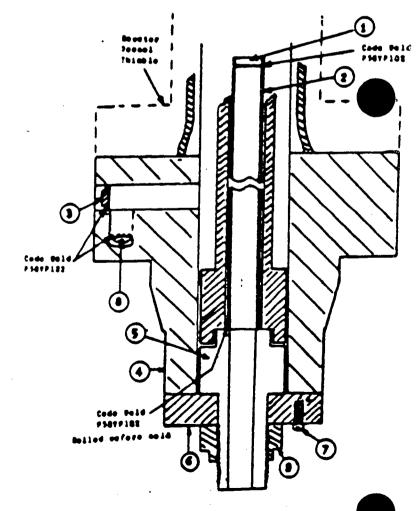
### PORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES' As required by the Provision of the ASME Code Rules, Section III, Div. I

Manufactured & Certified	by: GE Company, 2117 (	astle Hayne Rd	, wilmington,	N.C. 2840
(b) Manufactured for:	(Name and Duane Arnold	Address of NP	r Certificate alo, Iowa	Holder) 52324
(Name a	and Address of N Certifi	.cate Holder for	completed nu	clealpo
2. Identification-Certificat	e Holders's S/N of Part	A4291	Nat'l B	d. N. <u>N/A</u>
(a) Constructed According	to Drawing No: 761E387	G012 Rev 21 Dwg	. Prepared by	D. L. Pete
(b) Description of Part In	spected: CONTROL ROD D	RIVE, MODEL # 7	RDB144EG001	
(C) Applicable ASME Code:	Section III,Edition 197	4,Addenda Date	w'75, Case No	N207 1361-2 Cla
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- Cap 167A2343P1
   SA182-F304
   3/8 thick X 1 1/16 OD
- 2. Indicator Tube 104B1336P3 SA312-TP316 3/4 sch 40-seamless pipe 0.113 wall thickness 1.065 max. dia.
- 3. Plug 159All76Pl SAl82-F304 1/4 thick x 0.812 OD
- 4. Flange 919D610P1 (719E474)
   SA182-F304
   3.37 thick x 9 5/8 OD
- 5. Head 129B3539P3,P5 SA182-F304 3.0 OD x .884 ID
- 6. Ring Flange 114B5122P2 SA182-F304 1" thick x 5.0 OD x 1.75 ID
- 7. Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle
- 8. Plug 175A7961P1 SA182-F304 0.38 thick x 1.307 dia.
- y. Nut 114B5460P1SA193-B8A1.30 thick x 2.62 dia.



Sheet 2 of 2



#### FORM H-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPLICAMENTS' As required by the Provision of the ASME Code Rules, Section III, Div. I

Ma actured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 28401  (b) Manufactured for: Duane Arnold Palo, lowa 52324
(b) Manufactured 101.
Name and Address of N Certificate Holder for completed nuclear component
Identification-Oertificate Holders's S/N of Part: A5623 Nat'l Bd. No. N/A
(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. L. Peterson
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Class
REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.  (Brief description of service for which component was designed)
Sheet 1 of 2
certify that the statements in this report are correct and this vessel part or appurtenance defined in the code conforms to the rules of construction of the ASME Code Section III. the applicable Designed Specification and Stress Report are not the responsibility of the NPT rtificate Holder for parts. An NPT Certification Holder for appurtenances is responsible r furnishing a separate Design Specification and Stress Report if the appurtenance is not cluded in the component Design Specification and Stress Report).
TE: 5/29 ,19 90 Signed GE-NEBG-NF&OM-QA BY (NPT Certificate Holder) School REPRESENTATIVE
ctificate Of Authorization Expires: 6/16/90 Certification of Authorization No.: NPT N-1151
CERTIFICATION OF DESIGN FOR APPORTENANCE
esign information on file atGE COMPANY, SAN JOSE, CALIFORNIA
ress analysis report on file at <u>GE COMPANY, SAN JOSE, CALIFORNIA</u> 222A6253 Rev. 0
sign specification certified by <u>BJORN HAABERG</u> Prof. Eng. State <u>CALIF.</u> Reg. No. <u>15570</u>
ress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M018646
CERTIFICATION OF SHOP INSPECTION
I, the undersigned, holding a valid commission by the National Board of Boiler and Pressure ispectors and/or the State or Province of NORTH CAROLINA and employed by DEPARIMENT OF LABOR STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in this urtial Data Report on 5-27 1970, and state that to the best of my knowledge described, the NPT Certificate Holder has constructed this part in accordance with the ASME described or III.  By signing this certificate, neither the Inspector nor his employer makes any warranty, pressed or implied, concerning the part described in the Partial Data Report. Furthermore, ither the Inspector nor his employer shall be liable in any manner for any personal injury property damages or a loss of any kind arising from or connected with this inspection.
5-29,1990 Jume P. E. N.C. 123/ Typector's Signature National Board, State, Province and No.

pplemental sheets in form of lists, sketches or drawing may be used provided (1) size is ll", (2) information in 1-2 on this Data Report is included on each sheet, and (3) is numbered and number of sheets is recorded in Item 3. "REMARKSS"

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# FORM M-2 NPT CERTIFICATE BOLDERS' DATA REPORT FOR NOCLEAR PART AND APPORTENDACES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

Sheet 2 of	2
C) Applicable ASME code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2	Cles 1
(b) Description of Part Inspectod: CONTROL ROD DRIVE, MODEL # 7RDB144EG001	
(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. L. Pe	eter :
Identification-Certificate Holders's S/N of Part: A5623 Nat'l Bd. N. 1	
Name and Address of N Certificate Holder for completed nuclear co	mpor (2)
(Name and Address of NPT Certificate Holder) (D. Manufactured for: Duane Arnold Palo, Iowa 52324	
factured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 2	840.

- Cap 167A2343P1 SA182-F304 3/8 thick X 1 1/16 00
- Indicator Tube 10431336P3 SA312-TP316 3/4 sch 40-seamless pipe 0-113 wall thickness max. dia.

Plug 159All76Pl SA182-F304 1/4 thick x 0.812 (2)

Flange 919D610P1 (719E474) SA182-F304 3.37 thick x 9 5/8 50

Head 129B3539P3,P5 SA182-F304 3.0 OD x .884 ID

Ring Flange 114B51: 2 SA182-F304 1" thick x 5.0 OD x 1.75 ID

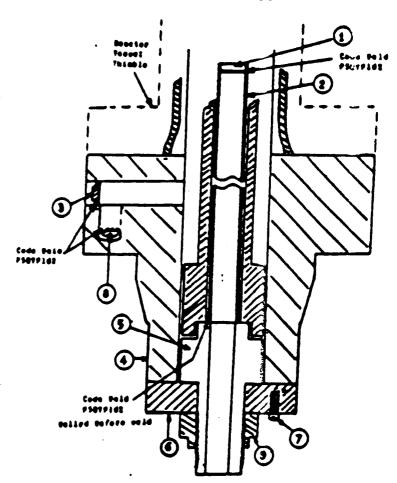
Cap Screw 117C4516:2 SA193-B6 6 ea. 1/2 dia. on a /8 bolt circle

Plug 175A7961P1 SA182-F304 0.38 thick x 1.307 @/a.



1.30 thick x 2.62 dia.

CONTROL ROD DRIVE DWG - 761E387



## FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCE As required by the Provision of the ASME Code Rules, Section III, Div. I

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(b) æs	cription of P	art Inspected:	CONTROL F	OD DRIVE, M	ODEL # 7RDB14		
(c) App	licable ASME	Oode: Section I	III, Edition 1974	, Addenda Da	te <u>W'75</u> , Case	N207 No. 1361-	<u>-2</u> C1
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pplemental sheets in form of lists, sketches or drawing may be used provided (1) 1/2" X 11", (2) information in 1-2 on this Data Report is included on each sheet, each sheet is numbered and number of sheets is recorded in Item 3. "REMARKSS"

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. Shell: Material (KindaSpe (KindaSpe ) . Seems: Long Girth	T.S. (Min  N.T. 1  N.T. 1  Crowr  rkom Redic  end (a)  ploted for al  otas Number  Number	Nominal Thickness i .ofRange Spec	Correction. Allows sified)  Elliptical Ratio  (c)st	fficiency_in. (  fficiency_in. of Course (b))  Conciel Apex Angle  Other Fast	Diaft  Diaft  Diaft  Hamispher Redius  Oning (Descr Drop W Cherpy W et tes	intengthssicel	ftinside to Prese (Conv.or Corc.  eketchft-lbft
. Shell: Material (KindaSpe (KindaSpe Girth ) . Seems: Long Girth   . Heads (a) Material Lecation e)Top, Bottom, Tick End   b)Channel   removable, bolts u . Design pressure <sup>2</sup>   . Sefoty Valve Outline   . Hozzloss   Purpose (Inlot Ostlet, Oroin)   . Inspection Manha Openingo: Hendi	T.S. (Min  N.T. 1  N.T. 1  Crowr  rkom Redic  ed (a)  ploted for al  otas Number  Number	Nominal Thickness i .ofRange Spec	Correction. Allows sified)  Elliptical Ratio  (c)st	original of the control of the contr	lea	sssssicel	ftin
Shell: Material (KindaSpe (KindaSpe (KindaSpe Girth ))  Heads (a) Material (Lecation )  Find (Lecation )  Find (Lecation )  Find (Lecation )  Find (Lecation )  Find (Lecation )  Find (Lecation )  Find (Lecation )  Besign pressure <sup>2</sup> (Lecation )  Besign pressure <sup>2</sup> (Lecation )  Head (Lecation )  Inspection (Lecation )  Inspection (Lecation )  Inspection (Lecation )  Inspection (Lecation )  Inspection (Lecation )	T.S. (Min  N.T. 1  N.T. 1  Crowr  rkom Redic  end (a)  ploted for al  otas Number  Number	Nominal Thickness i .ofRange Spec	Correction. Allows sified)  Elliptical Ratio  (c)st	original of the control of the contr	Diaft  Diaft  Diaft  Hamispher Redius  Oning (Descr Drop W Cherpy W et tes	intengthssicel	ftinside to Prese (Conv.or Corc.  eketchft-lbft
. Shell: Material (KindaSpe (KindaSpe ) . Seems: Long Girth	T.S. (Min  N.T. 1  N.T. 1  Crowr  rkom Redic  ed (a)  ploted for al  otas Number  Number	Nominal Thickness i .ofRange Spec	Correction. Allower cified)  Elliptical Ratio  (c)	Concial Apex Angle  Cable,	lea	intengthssicel	ftinside to Pread (Conv. or Concft-lb

<sup>2</sup> List other internal or oxternal pressure with conincident temperature when applicable.

### FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTEMANCES' As required by the Provision of the ASME Code Rules, Section III, Div. I

Manufactured & Certified	by: GE					
(b) Manufactured for:		ARNOLD		PALO, IO	Certificate WA 52324	
(Name	and Addr	ess of N C	ertificate B	Holder for	completed nu	cleal toc

2. Identification-Certificate Holders's S/N of Part: A8883 Nat'l Bd. N. N/A

(a) Constructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Pete

(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001

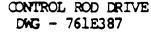
N207 (C) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Cl

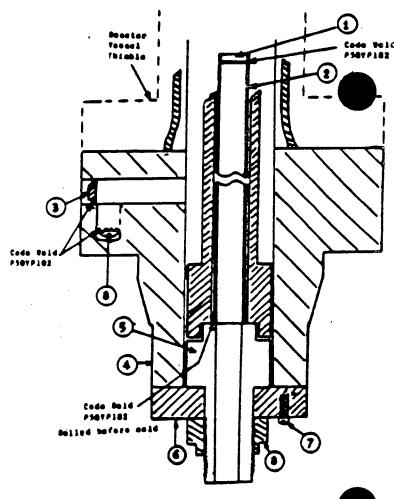
Sheet 2 of 2

1. Cap 167A2343P1 SA182-F304 3/8 thick X 1 1/16 OD

2. Indicator Tube 104B1336P3 SA312-TP316 3/4 sch 40-seamless pipa 0.113 wall thickness 1.065 max. dia.

- 3. Plug 159All76Pl SA182-F304 1/4 thick x 0.812 OD
- 4. Flange 919D610P1 (719E474)SA182-F3043.37 thick x 9 5/8 OD
- 5. Head 129B3539P3,P5 SA182-F304 3.0 OD x .884 ID
- 6. Ring Flange 114B5122P2 SA182-F304. 1" thick x 5.0 OD x 1.75 ID
- 7. Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle
- Plug 175A7961P1
   SA182-F304
   0.38 thick x 1.307 dia.
- .. Nut 114B5460P1 SA193-B8A 1.30 thick x 2.62 dia.





### FORM H-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURIENANCES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

l. Manuri	actured & Certified by: GE Company, 2117 Castle Havne Rd., Wilmington, N.C. 28401
	actured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 28401  (Name and Address of NPT Certificate Holder)  anufactured for: DUANE ARNOLD PALO, IOWA 52324
	(Name and Address of N Certificate Holder for completed nuclear component
2. Ider t	ification-Certificate Holders's S/N of Part: A4464 Nat'l Bd. No. N/A
κ. ( <b>.</b> β.)	nstructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Peterson
(b) ∃e:	scription of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
(c) 🙉	N207 plicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Class
3. REMIND	KS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.  (Brief description of service for which component was designed)
	(Brief description of service for which component was designed)
	Sheet 1 of 2
as def a	fy that the statements in this report are correct and this vessel part or appurtenanced in the code conforms to the rules of construction of the ASME Code Section III
(The application)	licable Designed Specification and Stress Report are not the responsibility of the NF ate Holder for parts. An NPT Certification Holder for appurtenances is responsible
for fura	ishing a separate Design Specification and Stress Report if the appurtenance is no in the component Design Specification and Stress Report).
	3/30 ,19 90 Signed GE-NEBG-NF&CM-QA BY SCO-QA REPRESENTATIVE
Certifi -	e Of Authorization Expires: 6/16/90 Certification of Authorization No.: NPT N-1151
	CERTIFICATION OF DESIGN FOR APPURITNANCE
Design	CERTIFICATION OF DESIGN FOR APPURIENANCE formation on file at GE COMPANY, SAN JOSE, CALIFORNIA
Stress	formation on file at GE COMPANY, SAN JOSE, CALIFORNIA alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA
Stress DC22A62 Design	formation on file at GE COMPANY, SAN JOSE, CALIFORNIA alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA Rev. 0 ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570
Stress DC22A62 Design	formation on file at GE COMPANY, SAN JOSE, CALIFORNIA  alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0  ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  Rev. 0.
Stress DC22A62 Design DC22A62	formation on file at GE COMPANY, SAN JOSE, CALIFORNIA  alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0  ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  Rev. 0.  alysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864
Stress DC22A62 Design DC22A62 Stress	formation on file at GE COMPANY, SAN JOSE, CALIFORNIA
Stress DC22A62 Design DC22A62 Stress	formation on file at GE COMPANY, SAN JOSE, CALIFORNIA  alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0  ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  Rev. 0.  alysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864  CERTIFICATION OF SHOP INSPECTION  undersigned, holding a valid commission by the National Board of Boiler and Pressure s and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR
Stress DC22A62 Design DC22A62 Stress  I, t Inspect of S Partia	alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0  ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  Rev. 0.  alysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864  CERTIFICATION OF SHOP INSPECTION  Undersigned, holding a valid commission by the National Board of Boiler and Pressure s and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR E OF NORTH CAROLINA have inspected the part of a pressure vessel described in this ata Report on 3/30 1990, and state that to the best of my knowledge
Stress DC22A62 Design DC22A62 Stress  I, t Inspect of S Partia	alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0  ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  Rev. 0.  alysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864  CERTIFICATION OF SHOP INSPECTION  Undersigned, holding a valid commission by the National Board of Boiler and Pressure s and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR E OF NORTH CAROLINA have inspected the part of a pressure vessel described in this ata Report on 3/20 1990, and state that to the best of my knowledge f, the NPT Certificate Holder has constructed this part in accordance with the ASME
Stress DC22A62 Design DC22A62 Stress  I, t Inspect of S Partia and bei Code Se By si	alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0 secification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  Rev. 0. alysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864  CERTIFICATION OF SHOP INSPECTION  Undersigned, holding a valid commission by the National Board of Boiler and Pressure s and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR E OF NORTH CAROLINA have inspected the part of a pressure vessel described in this ata Report on 3/30 1990, and state that to the best of my knowledge f, the NPT Certificate Holder has constructed this part in accordance with the ASME ion III. ing this certificate, neither the Inspector nor his employer makes any warranty, or implied, concerning the part described in the Partial Data Report. Furthermore.
Stress DC22A62 Design DC22A62 Stress  I, t Inspect of S Partia and bei Code Se By si	alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0 ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570 Rev. 0. alysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864  CERTIFICATION OF SHOP INSPECTION  Undersigned, holding a valid commission by the National Board of Boiler and Pressure s and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR E OF NORTH CAROLINA have inspected the part of a pressure vessel described in this ata Report on 3/70 1920, and state that to the best of my knowledge f, the NPT Certificate Holder has constructed this part in accordance with the ASME ion III. ing this certificate, neither the Inspector nor his employer makes any warranty, or implied, concerning the part described in the Partial Data Report. Furthermore, he Inspector nor his employer shall be liable in any manner for any personal in jury
Stress DC22A62 Design DC22A62 Stress  I, t Inspect of S Partia and bei Code Se By si express neither	alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0  ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  Rev. 0.  alysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864  CERTIFICATION OF SHOP INSPECTION  Undersigned, holding a valid commission by the National Board of Boiler and Pressure s and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR E OF NORTH CAROLINA have inspected the part of a pressure vessel described in this ata Report on 3/10/19/20, and state that to the best of my knowledge f, the NPT Certificate Holder has constructed this part in accordance with the ASME ion III.  ing this certificate, neither the Inspector nor his employer makes any warranty, or implied, concerning the part described in the Partial Data Report. Furthermore, he Inspector nor his employer shall be liable in any manner for any personal injury ty damages or a loss of any kind arising from or connected with this inspection.
Stress DC22A62 Design DC22A62 Stress  I, t Inspect of S Partia and bei Code Se By si express neither	alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0 ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570 Rev. 0. alysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864  CERTIFICATION OF SHOP INSPECTION  Undersigned, holding a valid commission by the National Board of Boiler and Pressure s and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR E OF NORTH CAROLINA have inspected the part of a pressure vessel described in this ata Report on 3/70 1920, and state that to the best of my knowledge f, the NPT Certificate Holder has constructed this part in accordance with the ASME ion III. ing this certificate, neither the Inspector nor his employer makes any warranty, or implied, concerning the part described in the Partial Data Report. Furthermore, he Inspector nor his employer shall be liable in any manner for any personal in jury
Stress DC22A62 Design DC22A62 Stress  I, t Inspect of S Partia and bei Code Se By si express neither or proc	alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0 ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570 Rev. 0. alysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864  CERTIFICATION OF SHOP INSPECTION  Undersigned, holding a valid commission by the National Board of Boiler and Pressure s and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LABOR E OF NORTH CAROLINA have inspected the part of a pressure vessel described in this ata Report on 3/10/1990, and state that to the best of my knowledge f, the NPT Certificate Holder has constructed this part in accordance with the ASME ion III. ing this certificate, neither the Inspector nor his employer makes any warranty, or implied, concerning the part described in the Partial Data Report. Furthermore, he Inspector nor his employer shall be liable in any manner for any personal injury by damages or a loss of any kind arising from or connected with this inspection.  3/20,1920 NC 1231 National Board, State, Province and No
Stress DC22A62 Design DC22A62 Stress  I, t Inspect of S Partia and bei Code Se By si express neither or prop	alysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  Rev. 0  ecification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15570  Rev. 0.  alysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M01864  CERTIFICATION OF SECT INSPECTION  Undersigned, holding a valid commission by the National Board of Boiler and Pressure s and/or the State or Province of NORTH CAROLINA and employed by DEPARIMENT OF LABOR E OF NORTH CAROLINA have inspected the part of a pressure vessel described in this ata Report on 3/20 1990, and state that to the best of my knowledge f, the NPT Certificate Holder has constructed this part in accordance with the ASME ion III.  ing this certificate, neither the Inspector nor his employer makes any warranty, or implied, concerning the part described in the Partial Data Report. Furthermore, he Inspector nor his employer shall be liable in any manner for any personal injury ty damages or a loss of any kind arising from or connected with this inspection.  3/30,1990 Appear P. Courts  NC 1231

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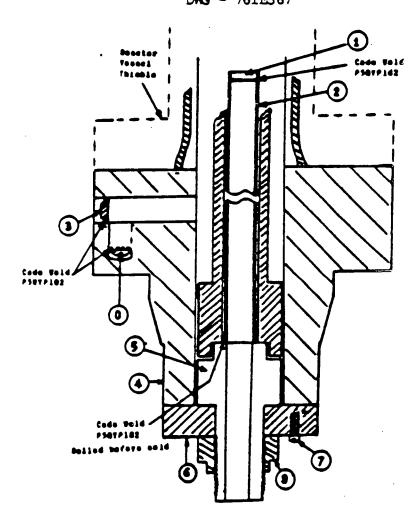
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1. Shell: Mate	rial	T.S	Nominal	Cerros _in. Allows	itan			
l. Shell: Mete (K:	rial_ nd&Spec.M	7.5. (Min	Nominel Thickness_ .ofRange Sp	Cerros _in, Allowe ecified)	iian neein.D	ian	_inLength_	_rcın .
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l. Shell: Mate (K:	rial_ nd&Spec.M	7.5. (Min	Nominel Thickness_ .ofRange Sp	Cerros _in, Allowe ecified)	iian neein.D	ian	_inLength_	_rcın .
l. Shell: Mate (K: 2. Seems: Long Girth 3. Haads (a) P Lecetion	rial_ ind&Spec.M	T.S. M.T.1 M.T.1	Nominel Thickness . of Renge Sp	Cerros in, Allows ecified)  Elliptical	officiency	se	_inLength_	
1. Shell: Mate (K: 2. Seems: Long Girth 3. Haade (a) P Lecetion (e) Top, Bottes End	rialnd&Spec.M	T.S.  M.T.1  M.T.1  Crown  Redi	Nominel Thickness .ofRenge Sp  R.T. R.T. Thickness Knucle us Redius	Cerros in. Allowe ecified)  Ellipticel Retio	officiency	seeterial_ Hamilepher: Redius	_inLength_	rtin.
1. Shell: Mate (K: 2. Seems: Long Girth 3. Haade (a) P Lecetion (e) Top, Bottes End	rialnd&Spec.M	T.S.  M.T.1  M.T.1  Crown  Redi	Nominel Thickness .ofRenge Sp  R.T. R.T. Thickness Knucle us Redius	Cerros in. Allowe ecified)  Ellipticel Retio	officiency	eeeterial_ Humi apher: Redius	SIcel Fat Disember	.Sin. Side to Press (Conv. or Conc.
1. Shell: Mate (K: 2. Seems: Long Girth 3. Haade (a) P Lecetion (e) Top, Bottes End	rialnd&Spec.M	T.S.  M.T.1  M.T.1  Crown  Redi	Nominel Thickness .ofRenge Sp  R.T. R.T. Thickness Knucle us Redius	Cerros in. Allowe ecified)  Ellipticel Retio	officiency	eeeterial	S	Side to Pread (Conv. or Conc.
1. Shell: Mate (K: 2. Seems: Long Girth 3. Haade (a) P Lecetion (e) Top, Bottes End b) Chennel	rialnd&Spec.M	T.S.  M.T.1  M.T.1  Crown  Redi	Nominel Thickness .ofRenge Sp  R.T. R.T. Thickness Knucle us Redius	Cerros in. Allowe ecified)  Ellipticel Retio	officiency	eeeterial	S  Local Fat Disconter  Use or ettach	Side to Pread (Conv. or Conc.
L. Shell: Mate (K: 2. Seems: Long Girth 3. Hands (a) P Lecetion (e) Top, Sottes End b) Channel removable, b	rialnd&Spec.M	T.S.  M.T.1  M.T.1  Crown  Redi	Nominal Thickness .ofRenge Sp .R.T. R.T. Thickness A Knucle Le Rediue (b)	Cerros in. Allowe ecified)  Ellipticel Retio	officiency_in. Officiency_in. of Cours_(b)M Conciel Apex Angle	eeeterial_ Humi apher: Redius (Descri Drop We Cherpy	S	Side to Pread (Conv. or Conc.
L. Shell: Mate (K: 2. Seeme: Long Girth 3. Hands (a) P Lecetion (e) Top, Sottes End (b) Channel Temovable, (b)	rialnd&Spec.M	T.S.  M.T.1  N.T.1  Cross  Redi  (8)	Nominel Thickness .ofRenge Sp	Cerros in. Allowe ecified)  E.  S. Elliptical Retio  (c)	officiency_in. D  Officiency_in. of Cours (b)M  Concisi Apex Angle  Other Faste	eeeterial	in_Length_  S  Icel Fat Disemter  Obe or ettach light Impact . ef	Side to Pread (Conv. or Conc.)
1. Shell: Mate (K: 2. Seems: Long Girth 3. Hands (a) P Lecetion (e) Top, Sottes End b) Channel 'removable, b	rialnd&Spec.M	T.S.  M.T.1  N.T.1  Cross  Redi  (8)	Nominel Thickness .ofRenge Sp	Cerros in. Allowe ecified)  E.  S. Elliptical Retio  (c)	officiency_in. D  Officiency_in. of Cours (b)M  Concisi Apex Angle  Other Faste	eeeterial	in_Length_  S  Icel Fat Disemter  Obe or ettach light Impact . ef	Side to Pread (Conv. or Conc.)
1. Shell: Mate (K: 2. Seems: Long Girth 3. Hands (a) P Lecetion (e) Top, Sottes End b) Channel removable, b	rialnd&Spec.M	T.S.  (Hin  H.T.1  N.T.1  Cross  Redi  (e)	Nominel Thickness .ofRenge Sp  R.T. R.T. Thickness Redius  (b)	Cerros in. Allows ecified)  Eliptical Retio  (c)  t st	officiency_in. D  Officiency_in. of Cours (b)M  Concisi Apex Angle  Other Faste	eeeterial	in_Length_  S  Icel Fat Disemter  Obe or ettach light Impact . ef	Side to Pread (Conv. or Conc.)
2. Seems: Long Girth 3. Heads (a) P Lecetion (e) Top, Bottom End (b) Channel f removable, b A. Dosign pres tems below to	rialnd&Spec.M	T.S.  (Hin  H.T.1  N.T.1  Cross  Redi  (e)	Nominel Thickness .ofRenge Sp  R.T. R.T. Thickness Redius  (b)	Cerros in. Allows ecified)  Elliptical Retio  (c)  t st	orien in. D  Officiency_ in. of Course (b)M  Concisi Apex Angle  Other Faste	eeeterial	in_Length_  S  Icel Fat Disemter  Obe or ettach light Impact . ef	Side to Pread (Conv. or Conc.)
1. Shell: Mate (K: 2. Seems: Long Girth 3. Hands (a) H Lecetion (e) Top, Sottem End (b) Channel f removable, b 4. Dosign pres 5. Sefety Valv 6. Nezzlos:	rialnd&Spec.M aterial, fichke olts used sure <sup>2</sup> be complete	T.S.  (Hin  H.T.1  N.T.1  Cross  Redi  (e)	Nominel Thickness .ofRenge Sp  R.T. R.T. Thickness Redius  (b)	Cerros in. Allows ecified)  Elliptical Retio  (c)  t st	orien in. D  Officiency_ in. of Course (b)M  Concisi Apex Angle  Other Faste	eeeterial	in_Length_  S  Icel Fat Disemter  Obe or ettach light Impact . ef	Side to Pread (Conv. or Conc.)  exetch
1. Shell: Mate (K: 2. Seems: Long Girth 3. Hands (a) H Lecetion (e) Top, Sottom End b) Channel 7 removable, b 6. Dosign pres	rialnd&Spec.M aterial, Ticnke olts used sure2 be completed outloted	T.S.  (Hin  H.T.1  N.T.1  Crown  Redii  (a)  Hard for al	Nominel Thickness .ofRenge Sp  R.T. R.T. Thickness Knucle us Redius  (b)	Cerros in. Allowe ecified)  S Elliptical Retio  (c)  i st  Size	orien in. D  Officiency_ in. of Course (b)M  Concisi Apex Angle  Other Faste	eeeterial	S  Leel Fat Disseter  Use or ettach Dispect Dispect Dispect Dispect	Side to Pread (Conv. or Conc.)  aketch  re-1b
1. Shell: Meta (K: 2. Seems: Long Girth 3. Hands (a) H Lecetion (e) Top, Sotton End b) Channel removable, b 3. Dosign pres cose below to 3. Sefety Valv 3. Nezzlos: Purpose (In	rialnd&Spec.M aterial, Ticnke olts used sure2 be completed outloted	T.S.  (Hin  H.T.1  N.T.1  Crown  Redii  (a)  Hard for al	Nominel Thickness .ofRenge Sp  R.T. R.T. Thickness Knucle us Redius  (b)	Cerros in. Allowe ecified)  S Elliptical Retio  (c)  i st  Size	fficiency_in. D  fficiency_b. of Cours (b)M  Conciel Apex Angle  Other Faste	eeeterial	in Length  S  Icel Fat Disember  Disember  Impact Dispect Dispect	Side to Pread (Conv. or Conc.)  aketch  re-1b
1. Shell: Meta (K: 2. Seems: Long Girth 3. Hands (a) H Lecetion (e) Top, Sottes End (b) Channel ' removable, b 3. Dosign pres cess below to 3. Sefety Valv 5. Nezzlos: Purposs (In	rialnd&Spec.M aterial, Ticnke olts used sure2 be completed outloted	T.S.  (Hin  H.T.1  N.T.1  Crown  Redii  (a)  Hard for al	Nominel Thickness .ofRenge Sp  R.T. R.T. Thickness Knucle us Redius  (b)	Cerros in. Allowe ecified)  S Elliptical Retio  (c)  i st  Size	fficiency_in. D  fficiency_b. of Cours (b)M  Conciel Apex Angle  Other Faste	eeeterial	in Length  S  Icel Fat Disember  Disember  Impact Dispect Dispect	Side to Pread (Conv. or Conc.)  aketch  re-1b
1. Shell: Meta (K: 2. Seems: Long Girth 3. Hands (a) H Lecetion (e) Top, Sottem End (b) Channel 7 removable, b 3. Dosign pres 1. Sefety Valv 5. Nozzlos: Purposs (In Outlet, Dre	rialnd&Spec.M  aterial, Ticnke   olts used   sure <sup>2</sup>   be comploise Outlots:	T.S.  (Hin  H.T.1  N.T.1  Crown  Redii  (a)  Humber	Nominal Thickness .ofRenge Sp  R.T. R.T. Thickness R.T. (b)  Die of Siz	Cerros in. Allowe ecified)  S. Elliptical Retio  (c)  stat  Size  Type	fficiency_in. D  fficiency_in. of Cours (b)M  Concisi Apex Angle  Other Faste	ee_eterial_ eterial_ Hamispher: Redius  Prop We Cherpy of at temp  Thickness	in_Length_  S  Icel Fat Disember  Disember  Impact Seinforcemer Material	Side to Pread (Conv. or Conc.)  eketch  re-1b
1. Shell: Mate (K: 2. Seems: Long Girth 3. Haade (a) ! Lecetion (e) Top, Bottes End (b) Channel 7 removable, b 6. Dosign pres (ems below to 6. Sefety Valv 6. Nazzles: Purpose (in Outlet, Dre	rialnd&Spec.M  aterial, Ticnke   olts weed   outs weed   outs weed   outs weed   outs weed   outs weed	T.S.  (Hin  H.T.1  N.T.1  Crowled Redii  (a)  Humber  Humber	Nominal Thickness .ofRenge Sp  R.T. R.T. Thickness R.T. Control of Redice  (b)  Die of Size	Cerros in. Allowe ecified)  S. Elliptical Retio  (c)  i st  stre  Type	fficiency_in. D  fficiency_in. of Cours (b)M  Concisi Apex Angle  Other Faste	ee_eterial_ Hamispher: Redium  Prop We Charpy of at temp  Location  Thickness	in_Length_  S  Icel Fat Disember  Disember  Impact Seinforcemer Material	Side to Pread (Conv. or Conc.)  eketch  re-1b
1. Shell: Mate (K: 2. Seems: Long Girth 3. Hands (a) H Lecetion (e) Top, Sottem End (b) Channel 7 removable, b 3. Dosign pres 3. Sefety Valv 5. Nazzlos: Purpose (In	e Outlote:  Manholes Handles,	T.S.  (Hin  H.T.1  N.T.1  Crowled Redia  (a)  ted for al  Number  Number	Nominal Thickness .ofRenge Sp  R.T. R.T. Thickness R.T. R.T. Thickness Redius  (b)  Dia of Siz	Cerros in. Allowe ecified)  S  Elliptical Retio  (c)  i st  stre  Type  Size	fficiency_in. D  fficiency_in. of Cours (b)M  Concisi Apex Angle  Other Fasts	ee eterial Hamispher Rediue  Orap We Cherpy of at temp  Location  Thickness	in_Length_  S  Icel Fat Disember  Disember  Impact Seinforcemer Material	Side to Pread (Conv. or Conc.)  eketch  re-1b
1. Shell: Mate (K: 2. Seems: Long Girth 3. Haade (a) ! Lecetion (e) Top, Bottes End (b) Channel 7 removable, b 6. Dosign pres (ems below to 6. Sefety Valv 6. Nazzles: Purpose (in Outlet, Dre	e Outlote:  Manholes Handles,	T.S.  (Hin  H.T.1  N.T.1  Crowled Redii  (a)  Humber  Humber	Nominal Thickness .ofRenge Sp  R.T. R.T. Thickness R.T. R.T. Thickness Redius  (b)  Dia of Siz	Cerros in. Allowe ecified)  S. Elliptical Retio  (c)  i st  stre  Type	fficiency_in. D  fficiency_in. of Cours (b)M  Concisi Apex Angle  Other Fasts	ee_eterial_ Hamispher: Redium  Prop We Charpy of at temp  Location  Thickness	in_Length_  S  Icel Fat Disember  Disember  Impact Seinforcemer Material	Side to Pread (Conv. or Conc.)  eketch  re-1b
1. Shell: Mate (K: 2. Seems: Long Girth 3. Hande (a) ! Lecetion (e) Top, Bottes End b) Channel removable, b 3. Dosign pres 3. Sefety Valv 5. Nazzles: Purpose (in Outlet, Dre	ndaSpec.M indaSpec.M interial	T.S.  (Hin  H.T.1  N.T.1  Crowled Redia  (a)  ted for al  Number  Number	Nominal Thickness .ofRenge Sp  R.T. R.T. Thickness R.T. R.T. Thickness Redius  (b)  Dia of Siz	Cerros in. Allows ecified)  Eliptical Retio  (c)  Size Size Size Size	Other Fasts  Cable.  Material	ee_eterial_ Hamispher: Redium  Prop We Charpy Charpy I ocetion_ Estion_  in_Length_  S  Icel Fat Disember  Disember  Impact Seinforcemer Material	Side to Pread (Conv. or Conc.)  eketch  re-1b	

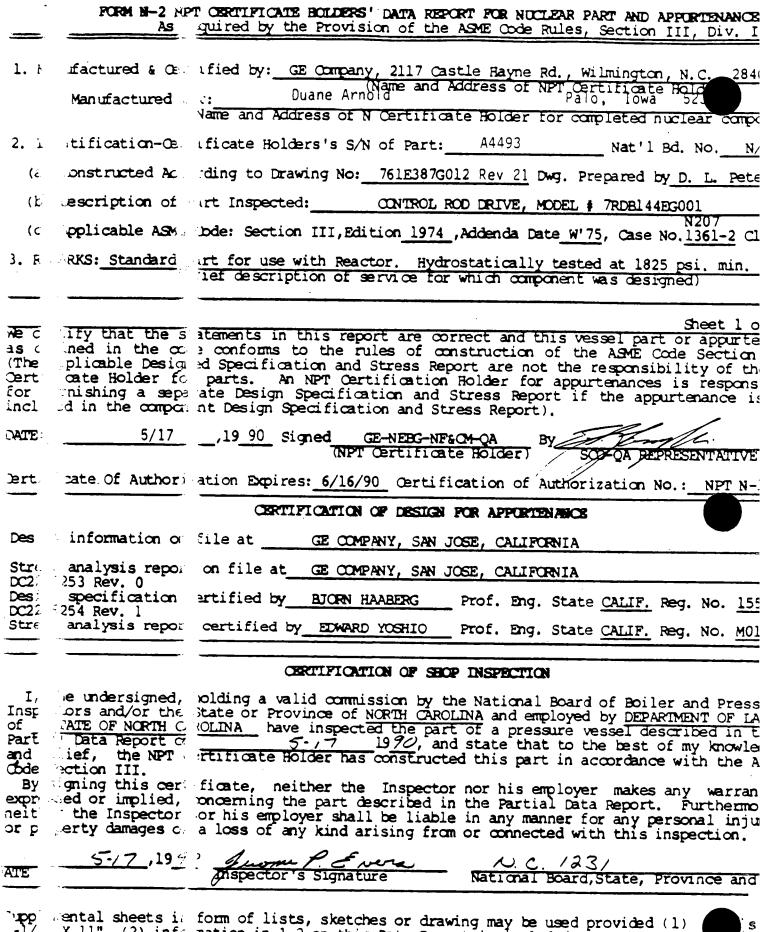
<sup>2</sup> List other internal or external pressure with conincident temperature when applied bo.

### FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

. Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 28401	
(Name and Address of NPT Certificate Holder)  Manufactured for: DUANE ARNOLD PALO, IOWA 52324	
(Name and Address of N Certificate Holder for completed nuclear componing	er.
2. Identification-Certificate Holders's S/N of Part: A4464 Nat'l Bd. N. N/A	
(a) binstructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Peter	<u>sc</u>
(b) escription of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001	
N207 (C) pplicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Class	88
	•
Sheet 2 of 2	

- 1. Cap 167A2343P1
  SA182-F304
  5/8 thick X 1 1/16 OD
- 2. Indicator Tube 104B1336P3
  SA312-TP316
  14 sch 40-seamless pipe
  113 wall thickness
  065 max. dia.
- 3. / ug 159Al176P1 (3182-F304 // thick x 0.812 OD
- 4. Plange 919D610P1 (719E474) F 182-F304 I 37 thick x 9 5/8 OD
- 5. Finad 129B3539P3,P5 5-182-F304 1:0 OD x .884 ID
- 6. Fing Flange 114B5122P2
  5:182-F304.
  1" thick x 5.0 OD x 1.75 ID
- 7. C:p\_Screw 117C4516P2 S:193-B6 t : a. 1/2 dia. on 4 1/8 bolt circle
- 8. Ping 175A7961P1 5182-F304 \_0.38 thick x 1.307 dia.
- 5. 114B5460P1 57193-B8A 1.30 thick x 2.62 dia.





"ental sheets is form of lists, sketches or drawing may be used provided (1)
-1/ X 11", (2) info mation in 1-2 on this Data Report is included on each sheet,
sach seet is numbered and number of sheets is recorded in Item 3. "REMARKSS"

(		•
	FORM H-2 (back)	
tems 4-4 Incl. to be comp	sted for single well vessels, jackets vessels, or sh	ells of heat exchangers,
m. 11. Makandal P	Nominal Cerrosian	
/	<pre>SThickness in Allowence in Diaft ic.No) (Min.ofRenge Specified)</pre>	
Sense I ma		
Girth	No. T. 1 P. T. No. of Cou	Paga
Heede: (a) Meterial	N.T.1 R.T. No. of Cou	5.
<del></del>		
Location (Top	Crown Knuckle Elliptical Concial Hesispherical	Flat Side to Press.
	Redius Redius Retia Apex Angla Redius	Diameter (conv.or conc.
b)	Other feetening	
(Materia)	Other factoring (Describe	or attach sketch)
Server Clossist		
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Design Freseure 2 125	0pei et575 4 Cherpy 1 ==	n-1b
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ms 9 and 10 to be complet	ad for tube sections	
Tube Sheets: Stationary	Met'lDiaThickness_i (Kind of Spec. No.) (Subj.to Press.)	N. Attacheent
•	(Kind of Spec, No.) (Subj.to Press.)	(Welded, Boltad)
Floeting, Nati	orialDia,Thicknessin. A	ttachment
	Inches	<del></del>
<b>.</b>		
Tubes: Neterial	o_oin. Thicknesser gags. Number	
ms 11-14 incl. to be compl	o.D. in . Thickness er gags . Number	(Str. ar U)
Shell: Meteriel T.S. (Kind&Spec.Me.)	o.D. in. Thickness er gage. Number    stad for inner chambers of jacketed vassels, or chan   Nominal Cerrosian   Thickness in. Allowance in. Dis. ft. in (Min. ofRange Specified)	(Str. ar U)  mels of heat exchangers  _Lengthftin.
Shell: Meteriel T.S. (Kind&Spec.Me.)	o.D. in. Thickness er gage. Number    stad for inner chambers of jacketed vassels, or chan   Nominal Cerrosian   Thickness in. Allowance in. Dis. ft. in (Min. ofRange Specified)	(Str. ar U)  mels of heat exchangers  _Lengthftin.
Shell: MeterielT.S(Kind&Spec.Mo.)  Seese: LongH.TH.TH.T.	O.D. in Thickness or gage. Number  Leted for inner chambers of jacketed vassels, or cherr  Nominal Cerrosian  Thickness in Allowance in Dia. ft. in  (Min. of Range Specified)  1 R.T. Efficiency  R.T. No. of Courses	(Str. ar U)  The langth ft. in.
Shell: MeterielT.S(Kind&Spec.Ms.)  Seess: Long M.T		(Str. ar U)  rels of heat exchangers  Lengthftin.  \$
Shell: MaterialT.S(Kind&Spec.Ms.)  Seese: LongM.T	O.D. in Thickness or gags. Number    stad for inner chambers of jacketed vascels, or cheme	(Str. er U)  mels of hest exchangers  Lengthftin.  \$
Shell: MeterielT.S(Kind&Spec.Ms.)  Seese: LongH.T GirthH.T. Heads (a) Meterial scation Top, Bottom, Tichkose	O.D. in Thickness or gags. Number    stad for inner chambers of jacketed vascels, or cheme	(Str. ar U)  rels of heat exchangers  Lengthftin.  \$
Shell: Meteriel T.S. (Kind&Spec.Ms.)  Seese: Long M.T. Girth M.T. Heads (a) Meterial	O.D. in Thickness or gags. Number    stad for inner chambers of jacketed vascels, or cheme	(Str. er U)  mels of hest exchangers  Lengthftin.  \$
Shell: Meteriel T.S. (Kind&Spec.Ms.)  Seese: Long M.T. Girth M.T. Heads (a) Meterial	O.D. in Thickness or gags. Number  Isted for inner chambers of jacketed vascels, or chem  Nominal Cerrosian Thickness in Allowance in Dia. ft. in  (Min. of Range Specified)  I R.T. Efficiency I R.T. Mo. of Courses I S. (b) Material Crown Knucle Elliptical Conciel Hamispherical Redius Redius Ratio Apex Angle Redius	(Str. er U)  mels of hest exchangers  Lengthftin.  \$
Shell: Meteriel T.S. (Kind&Spec.Ms.)  Seese: Long M.T. Girth M.T. Heads (a) Meterial	O.D. in. Thickness or gags. Number    stad for inner chambers of jacketed vassels, or cheme	(Str. er U)  mels of hest exchangers  Lengthftin.  \$
Shell: Meteriel T.S. (Kind&Spec.Ms.)  Seese: Long M.T. Girth M.T. Heads (a) Meterial	O.D. in. Thickness or gags. Number    stad for inner chambers of jacketed vascels, or cherr   Nominal Cerrosian   Thickness in. Allowance in. Dis. ft. in     (Min. of Range Specified)     R.T. Efficiency     R.T.	(Str. ar U)  Mels of heat exchangers  Lengthftin.  \$
Shell: MeterielT.S(Kind&Spec.Mo.)  Seese: LongH.T	O.D. in Thickness or gags. Number    stad for inner chambers of jacketed vassels, or cham   Nominal   Cerrosian     Thickness in Allowance in Dia. ft. in     (Min. of Range Specified)     R.T.   Efficiency     R.T.   No. of Courses     T.S.   (b) Material     Crown Knucle Elliptical Canciel Hamispherical     Redius Radius Ratio Apex Angle Radius     (b)   (c)   Other Fastening     (Describe of Oregon Maight     Charpy Impact	(Str. er U)  hele of heat exchangers  Lengthftin.   T.S  fat Side to frees Disseter (Conv.or Core.)  r ettach sketch
Shell: MeterielT.S(Kind&Spec.Mo.)  Seese: LongH.T	O.D. in Thickness or gags. Number    stad for inner chambers of jacketed vassels, or cham   Nominal   Cerrosian     Thickness in Allowance in Dia. ft. in     (Min. of Range Specified)     R.T.   Efficiency     R.T.   No. of Courses     T.S.   (b) Material     Crown Knucle Elliptical Canciel Hamispherical     Redius Radius Ratio Apex Angle Radius     (b)   (c)   Other Fastening     (Describe of Oregon Maight     Charpy Impact	(Str. ar U)  Mels of heat exchangers  Lengthftin.  \$
Shell: Meteriel T.S. (Kind&Spec.Ms.)  Seese: Long H.T. Girth M.T. Heads (a) Meteriel M.T. Heads (b) Meteriel M.T. Heads (c) Meteriel M.T. Dosign pressure <sup>2</sup>	O.D. in Thickness er gage. Number	(Str. er U)  hele of heat exchangers  Lengthftin.   T.S  fat Side to frees Disseter (Conv.or Core.)  r ettach sketch
Shell: Meteriel T.S. (Kind&Spec.Mo.)  Seese: Long M.T. Girth M.T. Heads (a) Meteriel cetion  Top, Bottom, Tichkose End  Channel conovable, bolts used (a)	O.D. in Thickness or gags. Number    stad for inner chambers of jacketed vassels, or cham   Nominal   Cerrosian     Thickness in Allowance in Dia. ft. in     (Min. of Range Specified)     R.T.   Efficiency     R.T.   No. of Courses     T.S.   (b) Material     Crown Knucle Elliptical Canciel Hamispherical     Redius Radius Ratio Apex Angle Radius     (b)   (c)   Other Fastening     (Describe of Oregon Maight     Charpy Impact	(Str. er U)  hele of heat exchangers  Lengthftin.   T.S  fat Side to frees Disseter (Conv.or Core.)  r ettach sketch
Shell: Meteriel T.S. (Kind&Spec.Ms.)  Seese: Long M.T. Girth M.T. Heads (a) Meterial M.T. Heads (b) Meterial M.T. Heads (c) Me	O.D. in Thickness er gags Number     stad for inner chambers of jacketed vassels, or cham   Nominal   Cerrosian     Thickness in Allowance in Dia ft. in     (Min. afRange Specified)	(Str. er U)  hele of heat exchangers  Lengthftin.   T.S  Fat Side to Frees Disseter (Conv.or Core.)  r ettach exetch
Shell: Meteriel T.S. (Kind&Spec.Ms.)  Seese: Long M.T. Girth M.T. Heads (a) Meterial M.T. Heads (b) Meterial M.T. Heads (c) Me	O.D. in Thickness er gags Number     stad for inner chambers of jacketed vassels, or cham   Nominal   Cerrosian     Thickness in Allowance in Dia ft. in     (Min. afRange Specified)	(Str. er U)  hele of heat exchangers  Lengthftin.   T.S  fat Side to Free Disseter (Conv.or Core.)  r ettach sketch
Shell: Material T.S. (KindaSpec.Ms.)  Seese: Long M.T. Girth M.T. Heads (a) Material Section (Top, Bottss, Tichkose End (Channel Secondary bolts used (a) Dosign pressure 2 Safety Valve Outlets: Number Nozzleas	O.D. in Thickness er gags Number     stad for inner chambers of jacketed vassels, or cham   Nominal   Cerrosian     Thickness in Allowance in Dia ft. in     (Min. afRange Specified)	(Str. er U)  hele of heat exchangers  Lengthftin.   T.S  Fat Side to Frees Disseter (Conv.or Core.)  r ettach exetch
Shell: Material	O.Din. Thicknesser gags. Number	(Str. er U)  hele of heat exchangers  Lengthftin.   T.S  Fat Side to Frees Disseter (Conv.or Core.)  r ettach exetch
Shell: Material	O.Din. Thicknesser gags. Number	(Str. er U)  rels of heat exchangers  Lengthftin.  T.S  Fat Side to Press Disseter (Conv.or Core.)  r ettach sketch
Shell: Material	O.Din. Thicknesser gags. Number	(Str. ar U)  rels of heat exchangers  Lengthftin.   T.S.  Fat Side to Press Disseter (Conv.or Core.)  r ettach sketch  tft-1b
Shell: Material	O.Din. Thicknesser gags. Number	(Str. ar U)  rels of heat exchangers  Lengthftin.   T.S.  Fat Side to Press Disseter (Conv.or Core.)  r ettach sketch  tft-1b
Shell: Meteriel T.S. (Kind&Spec.Me.)  Seese: Long H.T. Girth H.T. Heads (a) Meterial section (Yop, Bottom, Tienkose End (Chennel removable, bolts used (a) Dosign pressure2  a below to be completed for Safety Valve Outlets: Number Outlet, Orein) Number	O.D. in Thickness or gags. Number    Stand for inner chambers of jecketed vassels, or chery   Nominal   Cerrosian     Thickness in Allowance in Dia. ft. in     (Min.ofRange Specified)    R.T.   Efficiency     R.T.   No. of Courses     T.S.   (b) Material     Crown Knucle Elliptical Conciel   Hamispherical Redius Redius     Redius Redius Ratio   Apex Angle   Redius     (b)   (c)   Other Fastening     (Describe of Drop Weight     Charpy Impair     Or all vessels where applicable.     Or all vessels where applicable     tr. ar U)  rels of heat exchangers  Lengthftin.   T.S.  Fat Side to Press Disseter (Conv.or Core.)  r ettach sketch  tft-1b	
Shell: Material T.S. (KindaSpec.Ms.)  Seess: Long M.T. Girth M.T. Heads (a) Material Seestion (Top, Bottss, Tichkoss End (Chennel Seestion)  Dosign pressure2  s below to be completed for Safety Valve Outlets: Number Mazzless Purpose (Inlot Outlet, Orein) Number (Inspection Marholss, No.	O.D. in Thickness or gage. Number	(Str. ar U)  mels of heat exchangers  Lengthftin.   T.S  Fat Side to Press Disseter (Conv.or Core.)  r ettach exetch  t
Shell: Meteriel [7.5.]  (Kind&Spec.Me.)  Seese: Long [M.T.]  Girth [M.T.]  Heads (a) Meteriel  scation (Top, Bottes, Tichkose End (Channel removable, bolts used (a)  Dosign pressure <sup>2</sup> a below to be completed for  Safety Valve Outlets: Numb  Mozzles: Purpose (Inlot Outlet, Orein) Number  (napection Manholse, No.)  penings: Handlee, No.	O.D. in Thickness or gags Number    Size   Locetion	(Str. er U)  mels of hest exchangers  Lengthftin.   T.S  Fat Side to Frees Disseter (Conv.or Core.)  r ettach exetch  t
Shell: Material T.S. (KindåSpec.Ms.)  Seess: Long H.T. Girth H.T. Heads (a) Material Section (Top, Bottas, Tienkoss End (Channel Seavable, bolts used (a) Dosign pressure 2  a below to be completed for Safety Valve Outlets: Number Nazzles: Purpose (Inlot Outlet, Orein) Number Nazzles: Purpose (Inlot Outlet, Ou	O.D. in Thickness or gage. Number	(Str. ar U)  mels of heat exchangers  Lengthftin.   T.S  Fat Side to Press Disseter (Conv.or Core.)  r ettach exetch  t

2 List other internal or external pressure with conincident temperature when applicable.

#### FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCES: As required by the Provision of the ASME Code Rules, Section III, Div. I

Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. (Name and Address of NPT Certificate Holder) Duane Arnold Palo, Iowa (b) Manufactured for:

(Name and Address of N Certificate Holder for completed nuclea

2. Identification-Oertificate Holders's S/N of Part: A4493 \_ Nat'l Bd. N. N/E

(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. L. Pete

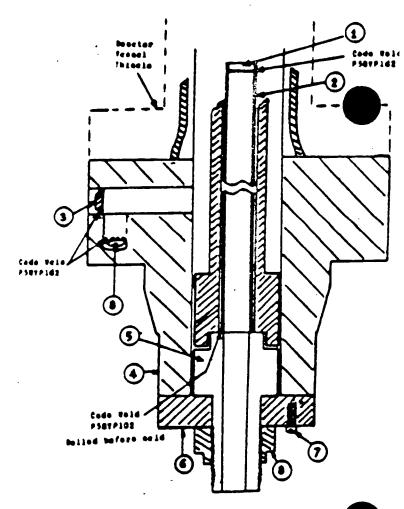
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001

N207

(C) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Cl

Sheet 2 of 2

- 1. Cap 167A2343P1 SA182-F304 3/8 thick X 1 1/16 00
- 2. Indicator Tube 104B1336P3 SA312-TF316 3/4 sch 40-seamless pipe 0.113 wall thickness 1.065 mail. dia.
- 3. Plug 159All76Pl SA182-F3-)4 1/4 thick x 0.812 OD
- 4. Flange 9.9D610P1 (719E474) SA182-F3-4 3.37 thick  $\times$  9 5/8 OD
- 5. Head 12933539P3,P5 SA182-F3 4 3.0 OD x .884 ID
- 6. Ring Flage 114B5122P2 SA182-F3.4 1" thick x 5.0 OD x 1.75 ID
- 7. Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle
- 8. Plum 175A7961P1 SA182-F304 0.38 thick x 1.307 dia.
  - Nut 114B5460P1 SA193-B8A 1.30 thick x 2.62 dia.



	FORM N-2 NPT CERTIFICATE BOILDERS' DATA REPORT FOR NUCLEAR PA As required by the Provision of the ASME Code Rules,	* AND APPORTENIANCES* ction III, Div. I
1. M	ufactured & Certified by: GE Company, 2117 Castle Havne Rd. wi	ington N.C. 39401
	Manufactured for: DUANE ARNOLD PALO, IOWA  Name and Address of N Certificate Holder for com-	ficate Holder) 52324 eted nuclear componen
2. Ic	ntification-Certificate Holders's S/N of Part: A8882	•
	Donstructed According to Drawing No: 761E387G012 Dwg. Pr	
	Description of Part Inspected: CONTROL ROD DRIVE, MODEL #	Mana
	Applicable ASME Code: Section III, Edition 1974, Addenda Date W'7	Case No. <u>1361-2</u> Class
3. RF	(Brief description of service for which component	t 1825 psi. min. designed)
(The Certifor	in the code conforms to the rules of construction of the cable Designed Specification and Stress Report are not the ce Holder for parts. An NPT Certification Holder for appurnishing a separate Design Specification and Stress Report if and in the component Design Specification and Stress Report).	NME Code Section III sponsibility of the NF nances is responsible to appurtenance is no
DATE:	3/30 ,19 90 Signed GE-NEBG-NF&CM-QA By (NPT Certificate Holder)	QA REPRESENTATIVE
œrti	cate Of Authorization Expires: 6/16/90 Certification of Authori	
	CERTIFICATION OF DESIGN FOR APPORTENANCE	
	information on file at GE COMPANY, SAN JOSE, CALIFORNIA	
14.24	analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA	
DC22 <i>i</i>	SOA VEA. O.	ALIF. Reg. No. 15570
	analysis report certified by EDWARD YOSHIO Prof. Eng. State	ALLIF. Reg. No. M01864
	CERTIFICATION OF SHOP INSPECTION	
of Part and Code	ne undersigned, holding a valid commission by the National Board tors and/or the State or Province of NORTH CAROLINA and employed TATE OF NORTH CAROLINA have inspected the part of a pressure vellata Report on 1970, and state that to the lief, the NPT Certificate Holder has constructed this part in acceptance.	y DEPARTMENT OF LABOR sel described in this best of my knowledge ordance with the ASME
neit	signing this certificate, neither the Inspector nor his employer sed or implied, concerning the part described in the Partial Data r the Inspector nor his employer shall be liable in any manner for perty damages or a loss of any kind arising from or connected with	Report. Furthermore,
ATE	3/30,1990 Anone P. Evers NC 1231  Inspector's Signature National Board,	cate, Province and No.

Experimental sheets in form of lists, sketches or drawing may be used provided (1) size is X 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each seet is numbered and number of sheets is recorded in Item 3. "REMPRIKSS"

1-1-1	1, 10 00 10		Manipal V	Co	IS. SECRECE	ABBRETA' 01	MATTE OF NE	et exchengess.
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Location (a)Top, Botton End	WECOLIST	Crown	Knucla E	lliptical	(D)M	Hemispher:	icel Fat	STOR OF LIVE
Location (a) Top, Botton End (b) Channel	t, Tichkere	Crown Redium	Knucla E	lliptical Ratio	Conciel Apex Angle	Humispher Redium	icel Fat	STOR OF LIGHT
Location (a)Top, Bottom End (b)Channel	t, Tichkere	Crown Redium	Knucla E	lliptical Ratio	Conciel Apex Angle	Homispher: Redium	icel Fet Diameter	(Conv.or Conc.)
Location (a)Top, Bottom End (b)Channel	t, Tichkere	Crown Redium	Knucla E	lliptical Ratio	Conciel Apex Angle	Hemispher: Redius  ening (Doscri	icel Fat Diameter	(Conv.er Conc.)
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<sup>2</sup> List other internsi or externs pressure with conincident temperature when applicable.

### FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES\* As required by the provision of the ASME Code Rules, Section III, Div. I

Mr ufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 28401

(Name and Address of NPT Certificate Holder)

(Manufactured for: DUANE ARNOLD PALO, IOWA 52324

(Name and Address of N Certificate Holder for completed nuclear component

2. It intification-Certificate Holders's S/N of Part: A8882 Nat'l Bd. N. N/A

(a) Constructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Peterson

(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001

N207

(C) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Class

Sheet 2 of 2

1. @ap 167A2343P1
@A182-F304

\_/8 thick X 1 1/16 OD

2. Indicator Tube 104B1336P3
A312-TP316
A sch 40-seamless pipe
113 wall thickness
.065 max. dia.

3. g 159Al176Pl A182-F304 3.4 thick x 0.812 OD

4. Cange 919D610P1 (719E474) (A182-F304 37 thick x 9 5/8 OD

5. Flad 129B3539P3,P5 CA182-F304 2.0 OD x .884 ID

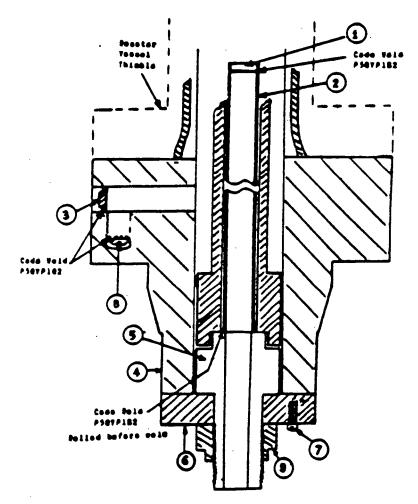
6. Ring Flange 114B5122P2 CA182-F304 1 thick x 5.0 OD x 1.75 ID

7. Cap Screw 117C4516P2 5 193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle

3. Plug 175A7961P1 5\182-F304 0.38 thick x 1.307 dia.

> 114B5460P1 93-B8A

1.30 thick x 2.62 dia.



# FORM N-2 NPT CERTIFICATE BOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCES As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Williangton, N.C. 2840 (Name and Address of NPT Certificate Hold (b) Manufactured for: DUANE ARNOLD PALO, 10WA 52324  (Name and Address of N Certificate Holder for completed nuclear compa
(b) Manufactured for: Board Address of N Certificate Holder for completed nuclear compo
2. Identification-Certificate Holders's S/N of Part: A2552 Nat'l Bd. No. No. No. No. No. No. No. No. No. No
(a) Constructed According to Drawing No: 761E387G012 Dwg. Prejared by D. L. Pete
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # RDB144EG001
(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 C
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.  (Brief description of service for which component wes designed)
Sheet 1 on this report are correct and this vessel part or appurted that the statements in this report are correct and this vessel part or appurted to the statements of the statement of the stateme
as defined in the code conforms to the rules of construction of the ASME Code Section (The applicable Designed Specification and Stress Report are not the responsibility of the Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance included in the component Design Specification and Stress Report).
DATE: 3/30 ,19 90 Signed GE-NEBG-NF&CM-QA By SO-QA REPRESENTATIVE
Oertificate Of Authorization Expires: 6/16/90 Certification of Authorization No.: NPT N-
CERTIFICATION OF DESIGN FOR APPORTENANCE
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA
DC22A6253 Rev. 0 Design specification certified by BUCRN HAABERG Prof. Eng. State CALIF. Reg. No. 15
Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MC
CERTIFICATION OF SHOP INSPECTION
I, the undersigned, holding a valid commission by the National Board of Boiler and Pres Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF I of STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in Partial Data Report on 3/30 1990, and state that to the best of my knowleand belief, the NPT Certificate Holder has constructed this part in accordance with the Code Section III.
By signing this certificate, neither the Inspector nor his employer makes any warra expressed or implied, concerning the part described in the Partial Data Report. Furthern neither the Inspector nor his employer shall be liable in any manner for any personal into or property damages or a loss of any kind arising from or connected with this inspection.
DATE NC 1231  Inspector's Signature National Board, State, Province and
upplemental sheets in form of lists, sketches or drawing may be used provided (1) if d-1/2" X 11", (2) information in 1-2 on this Data Report is included or each sheet, each sheet is numbered and number of sheets is recorded in Item 3. "REP VRKSS"

(10/77)

Iteme 4-8 Incl. to be complete			et exchangers,
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(Describe as	ogee and weld, ber, stc. 1	f bar give dimensions, if belts, des	
8 Decim Procesum 2 1950	noi et	Drop Weight	
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•	lin.ofRenge Specified)		
•	lin.ofRenge Specified)		
•	lin.ofRenge Specified)		
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12. Seass: Long N.T.1 Girth N.T.1  13. Heads (e) Material Location Cr (a) Top, Bettom, Ticnkase Re End	R.T. R.T. T.S. Town Knucle Elliptical	Efficiency	.SSide to Proce
12. Seass: Long N.T.1 Girth N.T.1  13. Heads (e) Material Lecation Cr (a) Top, Bettom, Ticnkase Re End (b) Channel	R.T. R.T. T.S. Town Knucle Elliptical dium Redium Retim	EfficiencyX No. of Courses(b)MaterialT. Concial Hemispherical Fet Apex Angle Redius Diesetar	.SSide to Proce
12. Seass: Long N.T.1 Girth N.T.1  13. Heads (e) Material Location Cr (a) Top, Bettom, Ticnkase Re End	R.T. R.T. T.S. Town Knucle Elliptical dium Redium Retim	EfficiencyX No. of Courses(b)MaterialT. Concial Hemispherical Fat Apex Angle Redium Diesetar Other Factoring	Side to Proce (Conv. or Conc.)
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12. Seass: Long N.T.1 Girth N.T.1  13. Heads (e) Material Lecation Cr (a) Top, Bettom, Ticnkase Re End (b) Channel	R.T. R.T. T.S. Town Knucle Elliptical dium Redium Retim	Ifficiency	Side to Proce (Conv. or Conc.)
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12. Seass: Long N.T. <sup>1</sup> Girth N.T. <sup>1</sup> 13. Heads (e) Material Location Cr (a) Top, Bettom, Tichkase Re End (b) Channel  If removable, belte used (e)	R.T. R.T. T.S.  Town Knucle Elliptical dium Redium Retia  (b) (c)  pel ot  all vessele where expli	Efficiency	Side to Proce (Conv. or Conc.)
12. Seass: Long N.T. <sup>1</sup> Girth N.T. <sup>1</sup> 13. Heads (e) Material Location Cr (a) Top, Bettom, Tichkase Re End (b) Channel  If removable, belte used (e)  14. Dasign pressure <sup>2</sup> Items below to be completed for  15. Sefety Valve Outlate: Number	R.T. R.T. T.S.  Town Knucle Elliptical dium Redium Retia  (b) (c)  pel ot  all vessele where expli	Efficiency	Side to Proce (Conv. or Conc.)
12. Seass: Long N.T. <sup>1</sup> Girth N.T. <sup>1</sup> 13. Heads (e) Material Location Cr (a) Top, Bettom, Tichkase Re End (b) Channel  If removable, belte used (e)  14. Dasign pressure <sup>2</sup> Items below to be completed for  15. Sefety Velve Outlate: Number	R.T. R.T. T.S.  Town Knucle Elliptical dium Redium Retia  (b) (c)  pel ot  all vessele where expli	Ifficiency	Side to Proce (Conv. or Conc.)
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12. Seass: Long N.T. <sup>1</sup> Girth N.T. <sup>1</sup> 13. Heads (e) Material Location Cr (a) Top, Bettom, Tichkase Re End (b) Channel  If removable, belte used (e)  14. Dasign pressure <sup>2</sup> Items below to be completed for  15. Sefety Velve Outlate: Number	R.T. R.T. T.S. Town Knucle Elliptical dium Redium Retim  (b) (c)	Ifficiency	Side to Proce (Conv. or Conc.)
12. Seass: Long N.T.  Girth N.T.  13. Heads (e) Material Location Cr (a) Top, Bettom, Tichkase Re End (b) Channel  If removable, belte used (e)  14. Dasign pressure2  Items below to be completed for  15. Sefety Valve Outlate: Number  16. Mezzlos: Purpose (Inlat	R.T. R.T. T.S. Town Knucle Elliptical dium Redium Retim  (b) (c)	State   Stat	Side to Proce (Conv. or Conc.) excetch
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12. Seass: Long N.T.  Girth N.T.  13. Heads (e) Material Lecation Cr (a) Top, Bettom, Tichkase Re End (b) Chennel  If removable, belte used (e)  14. Dasign pressure  Items below to be completed for  15. Sefety Valve Sutlate: Number  Purpose (Inlat Sutlet, Drain) Number  17. Inspection Manholes, No. Threaded, No. Threaded, No.	R.T.   R.T.   T.S.   State   Stat	Side to Proce (Conv. or Conc.) excetch	
12. Seass: Long N.T.  Girth N.T.  13. Heads (e) Material Lecation Cr (a) Top, Bettom, Ticnkase Re End (b) Chennel  If removable, belte used (e)  14. Daeign pressure  Items below to be completed for  15. Safety Valve Outlate: Number  Purpose (Inlat Outlet, Drain) Number  17. Inspection Membalee, No. Openinge: Hendlee, No. Threaded, No.  IB. Supports: Shirt  (Yes or No.)	R.T.   R.T.   T.S.   Efficiency	Side to Proce (Conv. or Conc.) excetch	
12. Seass: Long N.T.  Girth N.T.  13. Heads (e) Material Lecation Cr (a) Top, Bettom, Tichkase Re End (b) Chennel  If removable, belte used (e)  14. Dasign pressure  Items below to be completed for  15. Sefety Valve Sutlate: Number  Purpose (Inlat Sutlet, Drain) Number  17. Inspection Manholes, No. Threaded, No. Threaded, No.	Size   Size	State   Stat	Sida to Proce (Conv. or Conc.)  eketch  ft-1b

### FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES' As required by the Provision of the ASME Code Rules, Section III, Div. I

Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 284(

(Name and Address of NPT Certificate Holder)

(Name and Address of NPT Certificate Holder)

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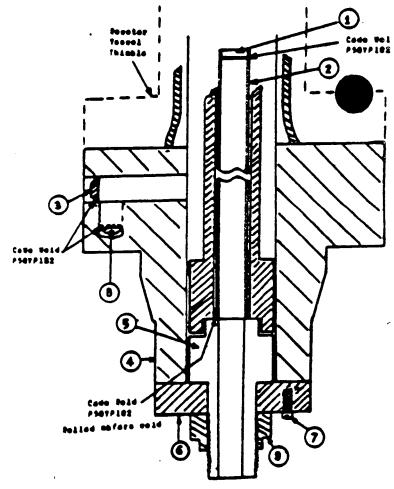
(a) Constructed According to Drawing No: 761E387G012

(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL & 7RDB144EG001

(C) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Cl

Sheet 2 of 2

- 1. Cap 167A2343P1
   SA182-F304
   3/8 thick X 1 1/16 OD
- 2. Indicator Tube 104B1336P3 SA312-TP316 3/4 sch 40-seamless pipe 0.113 wall thickness 1.065 max. dia.
- 3. Plug 159All76Pl SA182-F304 1/4 thick x 0.812 OD
- 4. Flange 919D610P1 (719E474) SA182-F304 3.37 thick x 9 5/8 OD
- 5. Head 129B3539P3,P5 SA182-F304 3.0 OD x .884 ID
- 6. Ring Flange 114B5122P2 SA182-F304 1° thick x 5.0 OD x 1.75 ID
- 7. Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle
- 8. Plug 175A7961P1 SA182-F304 0.38 thick x 1.307 dia.
- .. Nut 114B5460P1 SA193-B8A 1.30 thick x 2.62 dia.



# FORM N-2 NPT CERTIFICATE BOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES' As required by the Provision of the ASME Code Rules, Section III, Div. I

	nufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 28401  (Name and Address of NPT Certificate Holder)  (Name and Address of N Certificate Holder for completed nuclear componing
2. 1	entification-Certificate Holders's S/N of Part: A3994 Nat'l Bd. No. N/A
(a	Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. L. Peter
<b>(</b> b	Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
(c	Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Cla
3. F	ARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.  (Brief description of service for which component was designed)
(The Oert for incl	Sheet 1 of critify that the statements in this report are correct and this vessel part or appurtent fined in the code conforms to the rules of construction of the ASME Code Section applicable Designed Specification and Stress Report are not the responsibility of the ficate Holder for parts. An NPT Certification Holder for appurtenances is responsibility in the separate Design Specification and Stress Report if the appurtenance is ided in the component Design Specification and Stress Report).
DATE	5/17 ,19 90 Signed GE-NEBG-NF&CM-QA BY (NPT Certificate Holder) SCO-QA REPRESENTATIVE
	ricate Of Authorization Expires: 6/16/90 Certification of Authorization No.: NPT N-1
	CERTIFICATION OF DESIGN FOR APPORTENANCE
Des	gn information on file at GE COMPANY, SAN JOSE, CALIFORNIA
Str	A6253 Rev. 0
Des	on specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 155
Str	ss analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. M018
	CERTIFICATION OF SHOP INSPECTION
Insof Par and Ox E ext nei	the undersigned, holding a valid commission by the National Board of Boiler and Pressictors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LAW STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in the later than the NPT Certificate Holder has constructed this part in accordance with the AW Section III.  signing this certificate, neither the Inspector nor his employer makes any warrant essed or implied, concerning the part described in the Partial Data Report. Furthermore the Inspector nor his employer shall be liable in any manner for any personal injurtoperty damages or a loss of any kind arising from or connected with this inspection.
DATE	5-17,1990 Jume P. Evers No. C. 1231 Aspector's Signature National Board, State, Province and

\*Selemental sheets in form of lists, sketches or drawing may be used provided (1) size is 8-1 2" X 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3. "REMARKSS"

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. Design pressure <sup>2</sup> ses below to be comple . Sefety Valve Outlote		vessele where		€ st	temp. of	^
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. Design pressure <sup>2</sup> ems below to be comple  . Safety Valve Outlote  . Mazzles: Purpose (Inlot	i Number	vessele where	<b>29</b>	F st	nReinforcemen	₹
. Design pressure <sup>2</sup> ems below to be comple  . Safety Valve Outlote  . Nazzles: Purpose (Inlot	i Number	vessels where	<b>29</b>	F st	nReinforcemen	
. Design pressure <sup>2</sup> ems below to be comple  . Safety Valve Outlote  . Nazzles: Purpose (Inlot	i Number	vessels where	<b>29</b>	F st	nReinforcemen	
. Design pressure <sup>2</sup> ema below to be comple  . Sefety Valve Outlote  . Nazzles: Purpose (Inlot Outlot, Orain)	Number 0:	vessele where Si is er Size	Type Materi	Locations of thickness	Reinforcement Material	Attache
. Design pressure <sup>2</sup> ema below to be comple  . Sefety Valve Outlote  . Nazzles:     Purpose (Inlot     Outlot, Drain)  , Inspection Manholas	Number 0:	vessele whereSi is er Size	Type Materi	Location	Reinforcement Material	Attache
. Design pressure2	Number 0:	vessele whereSi is er SizeSizeSize	Type Materi	Location	Reinforcement Material	Attache
. Design pressure2	Number 0:	vessele whereSi is er SizeSizeSize	Type Materi	Location Location	Reinforcement Material	Attached
. Design pressure <sup>2</sup>	Number 0:	sizeSizeSize	Type Materi	Location Location Location Location	Reinforcement Material	Attache
. Design pressure2	Number 0:	vessele whereSi is er SizeSizeSize	Type Materi	Location Location Location Location	Reinforcement Material  Attached	Attache

List ether internal er external pressure with conincident temperature when applicable

#### PORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENIANCES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

.. Menufactured & Certified by: GE Company, 2117 Castle Rayne Rd., Wilmington, N.C. 2840

(Name and Address of NPT Certificate Holder) Duane Arnold Manufactured for:

Name and Address of N Certificate Holder for completed nuclear compor

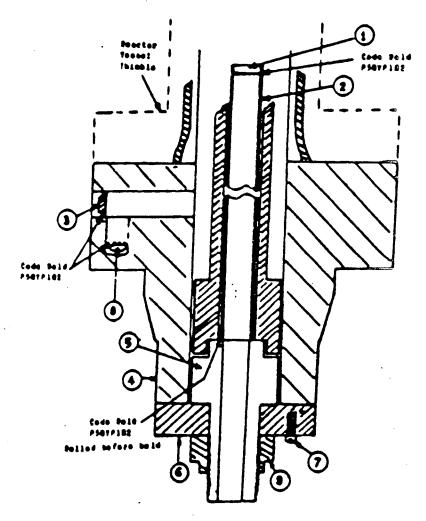
2. Icentification-Certificate Holders's S/N of Part: A3994 Nat'l Bd. N. N/A (a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. L. Peter

(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RD8144EC001

(C) Applicable ASME Code: Section III, Edition 1974, Addenda Date w'75, Case No. 1361-2 Cla

Sheet 2 of 2

- 1. ap 167A2343P1 A182-F304 3/8 thick X 1 1/16 00
- 2. Indicator Tube 104B1336P3 -A312-TP316 1/4 sch 40-seamless pipe .113 wall thickness 065 max. dia.
- 3. Thus 159All 76Pl €\182-F304 1/4 thick x 0.812 on
- Flange 919D610P1 (719E474) €1182-F304 3.37 thick x 9 5/8 00
- 5. head 12983539P3,P5 5 \182-F304 3.0 OD x .884 ID
- Ring Plange, 114B5122P2 6. 54182-F304 1 thick x 5.0 OD x 1.75 ID
- 7. Cap Screw 117C4516P2 ⊊ 193-B6 6 aa. 1/2 dia. on 4 1/8 bolt circle
- 3. Plug 175A7961P1 SF 182-F304 8 thick x 1.307 dia.
- NEE 114B5460P1 SA193-B8A 1.30 thick x 2.62 dia.



FORM H-2 N	CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPUR	NCES*
1. Manufactured & Oe.	Duane Arnold Castle Hayne Rd., Wilmington, N.C	28401
(b) Manufactured :	Duane Arnold Palo, lowa 52	ampane
2. Identification-Oer	ificate Holders's S/N of Part: A4286 Nat'l Bd. N.	
	ding to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D.	Peters
	ort Inspected: CONTROL ROD DRIVE, MODEL # 7ROB144EG001	-
	rt for use with Reactor. Hydrostatically tested at 1825 psi	
	lef description of service for which component was designed	in.
e certify that the	stements in this report are correct and this vessel part or	1 of 2
i is delined in the c	conforms to the rules of construction of the ACME Code of Specification and Stress Report are not the resconsibility parts. An NPT Certification Holder for appurtenances is	cian II
l .or remississing a sec	parts. An NPT Certification Holder for appurtmances is ate Design Specification and Stress Report if the appurtment Design Specification and Stress Report).	oce aibl
	10 00 Signed on November 201	
		TIVE
- III ale of Addroi	ation Expires: 6/16/90 Certification of Authorization No.:	r N-1
Design information ca	Eile at GE COMPANY, SAN JOSE, CALIFORNIA	
,	on file at GE COMPANY, SAN JOSE, CALIFORNIA	
Design specification	ertified by BJORN HAABERG Prof. Eng. State CALIF. Reg.	15570
Stress analysis repo	certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg.	M0186
	CERTIFICATION OF SHOP INSPECTION	
and accurating	olding a valid commission by the National and of Boiler and tate or Province of NORTH CAROLINA and employed by DEPARTMEN OLINA have inspected the part of a pressure vessel described to the best of my rtificate Holder has constructed this part in accordance with	വയിക്ക്യ
	ficate, neither the Inspector nor his employer makes any oncerning the part described in the Partial Data Report. Further or his employer shall be liable in any manner for any personal aloss of any kind arising from or connected with this inspec	เกาเพา
5-29 ,19 VIE	Inspector's Signature National Board, State, Provin	and N
	form of lists, sketches or drawing may be used provided (1) smation in 1-2 on this Data Report is included on each sheet, and number of sheets is recorded in Item 3. "REMARKSS"	e is

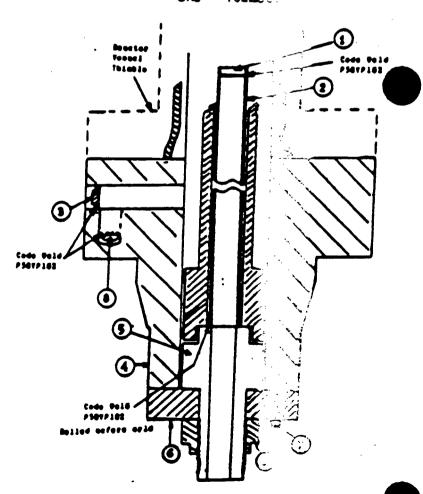
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	(Min. ofRenge Specified	•	•	
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P. Seemes Long N.T Girth N.T	1	Efficiency	s	·
C. Seame: Long N.T  Girth N.T  Heads (a) Material	0.10.T	Efficiency No. of Courses (b) Natorial	\$	s.
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End b)Channel removablo, boite used (a) . Design pressure <sup>2</sup> . Sefaty Velve Gutleta: Num . Mazzlea: Purpose (Inlat Gutlet, Orein) . Number . Inspection Manholes, No.		Other Festening (Deec Drop Chery of at te	Reinforcement Motorial	ekatch
End b)Channel removablo, beite used (a) . Design pressure <sup>2</sup> . Sefaty Velve Outlete: Num . Mazzles: Purpose (Inlat Outlet, Orain) Number . Inspection Manholes, No. Openings: Handles, No.	pei et	Other Festening (Deec Drop Cherry et te plicable.  Location Location	Reinforcement	ekatch
End b)Channel removablo, belte used (a) . Design pressure <sup>2</sup> . Sefaty Velve Gutleta: Num . Mazzles: Purpose (Inlat Gutlet, Orein) . Number		Other Fastening (Dead Drop Charp F at to plicable.  Location Location Location Location	Reinforcement Motorial	ekatch
End b)Channel removablo, boite used (a) . Design pressure <sup>2</sup> . Sefaty Velve Gutleta: Num . Mazzlea: Purpose (Inlat . Gutlet, Drain) . Number . Inspection Manholes, No Threaded, Re.	pei et	Other Festening (Deec Drop Cherry et te plicable.  Location Location	Reinforcement	ekatch
End b)Channel removablo, beite used (a) . Design pressure <sup>2</sup> . Sefaty Velve Outlete: Num . Mazzles: Purpose (Inlat Outlet, Orain) Number . Inspection Manholes, No Threaded, No Supports: Shirt	pei et	Other Festening (Deec Drop Chery at te	Reinforcement	ekatch
End b)Chennel removablo, bolte used (a)  Design pressure <sup>2</sup> Mas below to be completed f  Sefaty Velve Outleta: Num  Nazzlea: Purpose (Inlat Outlet, Drain) Numbe  Inspection Manholes, No. Openings: Handles, No. Threaded, No. Supports: Shirt	pei et	Other Festening (Deec Drop Charp T at to pliceble. Location Location Location Location Location	Reinforcement Motorial  Attached	ekatch
End D)Chennel removablo, belte used (a) Design pressure2  ma below to be completed f Sefaty Velve Outlete: Num Nezzles: Purpose (Inlat Outlet, Orain) Number  Inspection Manholes, No. Threaded, No. Supports: Shirt		Other Festening (Deec Drop Charp Charp at te pliceble. Location Location Location Location Location	Reinforcement Motorial  Attached	ekatch

<sup>2</sup> List other internal ar external pressure with comincident temperature when applicable.

FORM N-2 NPT CERTIFICATE BOLDERS' DATA REPORT FOR NUCLEAR PART A As required by the Provision of the ASME Code Rules, Sect	ORTENANCES I, Div. I
Sanufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmin (Name and Address of NPT Certification)  (b) Manufactured for: Duane Arnold Palo, Iow	N.C. 284 Holder) 52324
Name and Address of N Certificate Holder for complet	
2. Identification-Certificate Holders's S/N of Part: A4286 No.	
(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepare	
(b) Description of Fart Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EC	N207
(C) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Cast	1361-2 Cl 1
	et 2 of 2

- 1. Cap 167A2343P1 SA182-F304 3/8 thick X 1 1/16 00
- 2. Indicator Tube 10481336P3
  SA312-TP316
  3/4 sch 40-seamless pipe
  0.113 wall thickness
  1.065 max. dia.
- 3. Plug 159All76Pl SA182-F304 1/4 thick x 0.812 pp
- 4. Flange 919D610P1 (719E474) SA182-F304 3.37 thick x 9 5/8 OD
- 5. Head 129B3539P3,P5 SA182-F304 3.0 CD x .884 ID
- 6. Ring Flange 114B5122P2 SA182-F304 1 thick x 5.0 CD x 1.75 ID
- 7. Cap Screw 117C4516?2 SA193-B6 6 ea. 1/2 dia. on 1/8 bolt circle
- Plug 175A7961P1
   SA182-F304
   0.38 thick x 1.307 dia.
- out 114B5460P1 SA193-B8A 1.30 thick x 2.62 dia.

CONTROL ROD LAND DWG - 761E



# FORM N-2 NPT CERTIFICATE BOILDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 28401
i. Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 28401  (Name and Address of NPT Certificate Holder)  Manufactured for: DUANE ARNOLD PALO, 10WA 52324  (Name and Address of N Certificate Holder for completed nuclear components)
2. Identification-Certificate Holders's S/N of Part: A4619 Nat'l Bd. No. N/A
(a) Constructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Peter
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001 N207
(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Class
3. REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.  (Brief description of service for which component was designed)
Sheet 1 of
We certify that the statements in this report are correct and this vessel part or appurters as defined in the code conforms to the rules of construction of the ASME Code Section (The applicable Designed Specification and Stress Report are not the responsibility of the Certificate Holder for parts. An NPT Certification Holder for appurtenances is responsible for furnishing a separate Design Specification and Stress Report if the appurtenance is included in the component Design Specification and Stress Report).
DATE: 3/30 ,19 90 Signed GE-NEBG-NF&CM-QA By J. SCO-QA REPRESENTATIVE
Dertificate Of Authorization Expires: 6/16/90 Certification of Authorization No.: NPT N-1
CERTIFICATION OF DESIGN FOR APPORTENANCE
Design information on file at GE COMPANY, SAN JOSE, CALIFORNIA
Stress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA
DC22A6253 Rev. 0  Design specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 155 DC22A6254 Rev. 0.
Stress analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO1
CERTIFICATION OF SHOP INSPECTION
I, the undersigned, holding a walid commission by the National Board of Boiler and Press Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LATOR STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in the Partial Data Report on 1990, and state that to the best of my knowled and belief, the NPT Certificate Holder has constructed this part in accordance with the A Code Section III.  By signing this certificate, neither the Inspector nor his employer makes any warrant expressed or implied, concerning the part described in the Partial Data Report. Furthermoneither the Inspector nor his employer shall be liable in any manner for any personal injuror property damages or a loss of any kind arising from or connected with this inspection.
3/30,1990 O No 1231  DATE Repector's Signature National Board, State, Province and

"X 11", (2) information in 1-2 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded in Item 3. "REMARKSS"

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(b) If  14.  Item 15.	Seass: Long Girth Heads (e) Hocestion )Top, Bottes End )Channel removable, to Design precedes below to Sefety Valv Hezzloes	teterial	(e) (Nin.a	R. FR. FR. FR. FR. FR. FR. FR. FR. FR. FRRR	cified)  Eight S Eiliptical Ratio  (c)  st st Size	fficiency  o. of Course (b)Mc Conciel Apex Angle Other Factor	Hamispheric Redius  Ining (Describ Drop Weig Cherpy I et temp.	el Fat Dismeter  or ettach pht spect of	Side to Prece (Conv.or Conc. exatch
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(b) If   Item 15.	Sease: Long Girth Heads (e) ; ocetion ) Top, Sottes End )Chennel removable, to  Design prec me below to  Sefety Valv  Hezzloe: Purpose (In Dutlet, Dro	teterial	(e)	R.f	cified)  Eight S. Eiliptical Ratio  (c)  st  Type  Type  ze	Conciel Apex Angle Other Factor  Matorial	terial Hamispheric Redius  Ining (Describ Drop Weit Cherpy I st temp.  Location  Thickness	el Fat Dismeter e or ettach pht spect ef	Side to Prece (Conv.er Conc. Sketch Pt-1b of
(b) If   Item 15.	Sease: Long Girth Heads (e) ; ocetion ) Top, Sottes End )Chennel removable, to  Design prec me below to  Sefety Valv  Hezzloe: Purpose (In Dutlet, Dro	teterial	(e)	R.f	cified)  Eight S. Eiliptical Ratio  (c)  st  Type  Type	Conciel Apex Angle Other Factor  Matorial	terial Hamispheric Redius  Ining (Describ Drop Weic Cherpy I F et temp.  Location  Thickness	el Fat Dismeter e or ettach pht spect ef	Side to Prece (Conv.er Conc. Sketch Pt-1b of
(b) 17 : 14. Item 15. 16.	Sease: Long Girth Heads (e) ; ocetion ) Top, Sottes End ) Chennel removable, to  Design prec me below to  Sefety Valv  Hezzloe: Purpose (In Dutlet, Dro  Inspection Openings:	teterial	(e)	R.fR	st	Conciel Apex Angle Other Factor  Matorial Lo	terial Hamispheric Redius  Ining (Describ Drop Weit Cherpy I st temp.  Location  Thickness  Retion Retion Retion	el Fat Dismeter e or ettach pht pact ef	Side to Prece (Conv.er Conc. Sketch Pt-1b of
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<sup>&</sup>lt;sup>2</sup> List other internal or external pressure with conincident temperature when applicable.

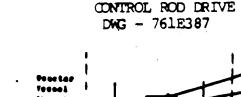
#### FORM H-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

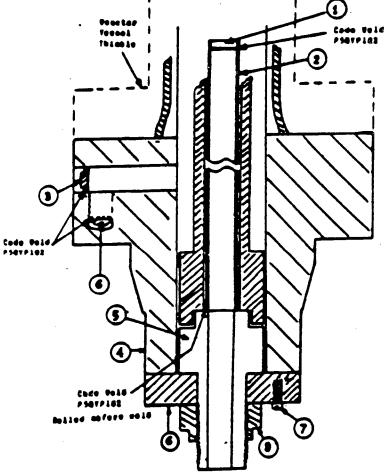
Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 2840.  (Name and Address of NPT Certificate Holder)  Manufactured for: DUANE ARNOLD PALO, IOWA 52324  (Name and Address of N Certificate Holder for completed nuclear comport.  Identification-Certificate Holders's S/N of Part: A4619 Nat'l Bd. N. N/A	1401
(Name and Address of N Certificate Holder for completed nuclear components)	
. Identification-Certificate Holders's S/N of Part: A4619 Nat'l Bd. N. N/A	paner
	/ <b>A</b>
(a) Constructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Peter	ters
(b) Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001	
(C) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Cla	Class

Sheet 2 of 2

- 1. Cap 167A2343P1 SA182-F304 3/8 thick X 1 1/16 00
- Indicator Tube 104B1336P3 SA312-TP316 3/4 sch 40-seamless pipe 0.113 wall thickness 065 max. dia.
- 3. Plum 159Al176Pl SA182-F304 1/4 thick x 0.812 OD
- Flange 919D610P1 (719E474) SA182-F304 3.37 thick x 9 5/8 OD
- Head 129B3539P3,P5 SA182-F304 3.0 OD x .884 ID
- 6. Ring Flange 114B5122P2 SA182-F304 . 1" thick x 5.0 OD x 1.75 ID
- 7. Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle
- Plum 175A7961P1 SA182-F304 0.38 thick x 1.307 dia.
- t 114B5460P1 SA193-B8A

1.30 thick x 2.62 dia.





# FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTSNANCES As required by the Provision of the ASME Code Rules, Section III, Div. I

1. Mż	ufactured & Certified by: GE Company, 2117 Castle Bayne Rd., Wilmington, N.C. 2840  (Name and Address of NPT Certificate Holder  Manufactured for: DUANE ARNOLD PALO, IOWA 52324
(:	Manufactured for: DUANE ARNOLD PALO, 10wA 52324  (Name and Address of N Certificate Holder for completed nuclear appointments)
. <b>2.</b> Ic	entification-Certificate Holders's S/N of Part: A5075 Nat'l Bd. No. N/
(a	Constructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Pete
(b	Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
(c	Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 CL
3. R	ARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. min.  (Brief description of service for which component was designed)
as d (The Certi	cate Holder for parts. An NPT Certification Holder for appurtenances is responsive in the separate Design Specification and Stress Report 1f the appurtenance is and in the component Design Specification and Stress Report).
DATE:	3/30 ,19 90 Signed GE-NEBG-NF&CM-QA BY SCO-QA REPRESENTATIVE
œrti	cate Of Authorization Expires: 6/16/90 Certification of Authorization No.: NPT N-
	CERTIFICATION OF DESIGN FOR APPORTENANCE
Desi	information on file at GE COMPANY, SAN JOSE, CALIFORNIA
Stre	information on file at GE COMPANY, SAN JOSE, CALIFORNIA  s analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  5253 Rev. 0
Stre DC22 Desi DC22	information on file at GE COMPANY, SAN JOSE, CALIFORNIA  s analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15: 3254 Rev. 0.
Stre DC22 Desi DC22	information on file at GE COMPANY, SAN JOSE, CALIFORNIA  analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  3253 Rev. 0  specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15!
Stre DC22 Desi DC22	information on file at GE COMPANY, SAN JOSE, CALIFORNIA  s analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15: 3254 Rev. 0.
Stre DC22 Desi DC22 Stre Insp of Part and	information on file at GE COMPANY, SAN JOSE, CALIFORNIA  analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  3253 Rev. 0  specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15:  3254 Rev. 0.  analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO:  CERTIFICATION OF SHOP INSPECTION  ne undersigned, holding a valid commission by the National Board of Boiler and Press tors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF 12:  TATE OF NORTH CAROLINA have inspected the part of a pressure vessel described in the late of the NPT Certificate Holder has constructed this part in accordance with the 1-
Stre DC22 Desi DC22 Stre  I, Insp of Part and Code By expre neiti	GE COMPANY, SAN JOSE, CALIFORNIA  s analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  1253 Rev. 0  specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15:  1254 Rev. 0.  analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO:  CENTIFICATION OF SHOP INSPECTION  ne undersigned, holding a valid commission by the National Board of Boiler and Press tors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF LATTER OF NORTH CAROLINA have inspected the part of a pressure vessel described in the Total Report on SINGLIP (AROLINA), and state that to the best of my knowledlief, the NPT Certificate Holder has constructed this part in accordance with the Accident III.  igning this certificate, neither the Inspector nor his employer makes any warrance sed or implied, concerning the part described in the Partial Data Report. Furthermore the Inspector nor his employer makes any warrance or implied, concerning the part described in the Partial Data Report. Furthermore the Inspector nor his employer makes any personal in its concerning the part described in the Partial Data Report.
Stre DC22 Desi DC22 Stre  I, Insp of Part and Code By expre neiti	information on file at GE COMPANY, SAN JOSE, CALIFORNIA  analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  3253 Rev. 0  specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No. 15!  3254 Rev. 0.  analysis report certified by EDWARD YOSHIO Prof. Eng. State CALIF. Reg. No. MO:  CERTIFICATION OF SHOP INSPECTION  ne undersigned, holding a valid commission by the National Board of Boiler and Press tors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF 12-  TAME OF NORTH CAROLINA have inspected the part of a pressure vessel described in the later of the NPT Certificate Holder has constructed this part in accordance with the 1-

and the second second and the second	
Itoms 4-8 Incl. to be completed for single well vessely, jacket	a vessels, or shells of heat exchangers,
Naminal Carrosian	
4. Shell: Metarial T.S. Thickness in Allowence	_tu_hreitm. caudeuitm.
(Kind & Spec.No) (Min. ofRenge Specified)  5. Seems: Long N.T. R.T. R.T.	Efficiency
GirthN.T.1R.T	No. of Courses
6. Heedo: (a) Material T.S. (b) Mate	tial
Location (Top Crown Knuckle Elliptical Concis	Hemispherical Flot Side to Fresh
Bottom, Ends) Thickness Radius Radius Ratio Apex An	gis Redice Dismeter (conv.or conc.
(*)	<del></del>
if removable, bolts usedOther f	estening
(Meterial, Spec.No., T.S. Size Number)	(Describe or attach sketch)
7. Jacket Closure:	
(Describe as ages and seld, bor, etc. If ber give	
8. Daeign Pressure 2 1250 pei st 575 4	Cherry Ispect R-1b
	et temp. of of
Itams 9 and 10 to be completed for tube sections,	
A A A A A A A A A A A A A A A A A A A	Thistogram is Abbashasah
9. Tube Sheets: Stationery Met'l. Dia. (Kind of Spec. Mo.) (Subj.to /	Proce ) (Malded Solted)
Floating, Motorial Dle.	Thickness in Attachest
in	thes
10. Tubes: Material 0.0. in. Thickness or	gage . NumberType
•	(Str. or U)
	4
Items 11-14 incl. to be completed for inner chambers of jacketed	Assers' of custants of user excusudets
Nominal Corrector 11. Shell: Meterial f.S. Thickness in Allowance in	Die & in Leasth & in
(KindaSpec.Mp.) (Hin. ofRange Specified)	
12. Seeme: LongN.T. R.TEfficiency	<u>,                                     </u>
12. Sesme: Long M.T. R.T. Efficiency Girth N.T. R.T. No. of Cou	\$  tooo
12. Seeme: Long M.T. R.T. Efficiency  Girth N.T. R.T. Mo. of Cou	itsesT.S
12. Seeme: Long M.T. R.T. Efficiency  Girth N.T. R.T. No. of Cou  13. Heade (e) Material T.S. (b  Location Crown Knucle Elliptical Conciel  (a) T.S. Retter Tierles Retter Retter Approximately	)Metarial T.S. Hamispherical Fet Side to Prees
(8)Top, Bottom, Tichkeem Redius Redius Retia Apex Ang	y S Irses  O'Metarial T.S.  Hamispherical Fet Side to Press ple Redius Disester (Conv. or Conc.)
(a) Top, Sottes, Tichkess Redius Redius Retis Apex Ang End (b) Chennel	Disease (Conv. or Conc.)
(s)Top, Sottes, Tichkess Redius Redius Retis Apex Ang End (b)Chennel	stening
(a) Top, Sottes, Tichkess Redius Redius Retis Apex Ang End (b) Chennel	stening (Describe or strach skatch
(a) Top, Sottes, Tichkess Redius Redius Retis Apex Ang End (b) Chennel	Stening (Describe or ettach skatch
(a) Top, Bottom, Tichkeds Redius Redius Retis Apex Ang End (b) Chennel (f removable, bolts used (s) (b) (c) Other Fe	stening (Describe or ettach skatch Drop Weight
(s) Top, Sottes, Tichkess Redius Redius Retia Apex Ang End (b) Chennel [f removable, bolts used (s) (b) (c) Other Fe	Stening (Describe or ettach skatch
(a) Top, Sottes, Tichkess Redius Redius Retia Apex Ang End (b) Chennel  If removable, bolts used (s) (b) (c) Other Fe	stening (Describe or ettach skatch Drop Weight
End (b)Channel If removable, bolts used (s) (b) (c) Other Fe  14. Dosign pressure <sup>2</sup> pei et  Items bolow to be completed for all vessels where applicable.	Stening (Describe or ettach skatch Drop Weight Cherpy Impact Tt-1b T at temp. of
(a) Top, Sottes, Tichkess Redius Redius Retia Apex Ang End (b) Chennel (f removable, bolts used (a) (b) (c) Other Fe  14. Dosign pressure <sup>2</sup> pei st  15. Dosign pressure <sup>2</sup> pei st	Stening (Describe or ettach skatch Drop Weight Cherpy Impact Tt-1b T at temp. of
(a) Top, Sottes, Tichkess Redius Redius Retia Apex And End (b) Channel  If removable, bolts used (s) (b) (c) Other Fe  14. Dosign pressure <sup>2</sup>	Stening (Describe or ettach skatch Drop Weight Cherpy Impact T at temp. of
(a) Top, Bottom, Tichkeen Redius Redius Retia Apex Ang End (b) Chennel If removable, bolts used (s) (b) (c) Other Fe  14. Dosign pressure <sup>2</sup>	Location   Disaster (Conv. of Conc. )
(a) Top, Sottes, Tichkess Redius Redius Retia Apex Ang End (b) Channel If removable, bolts used (s) (b) (c) Other Fe  IA. Dosign pressure <sup>2</sup>	Redius Disaster (Conv. of Conc.,
(a) Top, Sottas, Tichkess Redius Redius Retia Apex Ang End (b) Channel If removable, bolts used (s) (b) (c) Other Fe  14. Dosign pressure <sup>2</sup>	Redius Disaster (Conv. of Conc.,
(a) Top, Sottes, Tichkess Redius Redius Retia Apex Ang End (b) Chennel If removable, bolts used (s) (b) (c) Other Fe  14. Dosign pressure <sup>2</sup>	Redius Disaster (Conv. of Conc.,
(a) Top, Sottes, Tienkess Redius Redius Retia Apex Ang End (b) Channel If removable, bolts used (s) (b) (c) Other Fe  IA. Dosign pressure <sup>2</sup>	Redius Disset (Conv.dr Conc.)   Stending
(a) Top, Sottes, Tienkess Redius Redius Retia Apex Ang End (b) Chennel If removable, bolts used (s) (b) (c) Other Fe  14. Dosign pressure <sup>2</sup>	Redius Disset (Conv.dr Conc.,
(a)Top, Sottes, Tichkess Redius Redius Retia Apex Ang End (b)Chennel If removable, bolts used (s) (b) (c) Other Fe  IA. Dosign pressure <sup>2</sup>	Redius Dissett (Conv.dt Cont.)   Stening
(a)Top, Sottes, Tienkess Redius Redius Retia Apex Ang End (b)Chennel If removable, bolts used (s) (b) (c) Other Fe  IA. Dosign pressure <sup>2</sup>	Redius Diasster (Conv.er Conc.)   Stending
(a) Top, Sottes, Tichkess Redius Redius Retia Apex Ang End (b) Chennel If removable, bolts used (s) (b) (c) Other Fe  14. Dosign pressure <sup>2</sup>	Redius Dissett (Conv. of Conc.)   Stending
(a) Top, Sottes, Tichkess Redius Redius Retia Apex Ang End (b) Chennel If removable, bolts used (s) (b) (c) Other Fe  14. Dosign pressure <sup>2</sup>	Redius Dissett (Conv. of Conc.)   Stening
(a) Top, Sottes, Tienkess Redius Redius Retia Apex Ang End (b) Chennel If removable, bolts used (s) (b) (c) Other Fe  14. Dosign pressure2	Redius Dissett (Conv. of Conc.)   Stening
(a) Top, Sottes, Tichkess Redius Redius Retia Apex Ang End (b) Chennel If removable, bolts used (s) (b) (c) Other Fe  14. Dosign pressure <sup>2</sup>	Checribo or stach skatch

# FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENANCES\* As required by the Provision of the ASME Code Rules, Section III, Div. I

٠.	Mc.	ufactured & Certified	by: GE						
	(t	Manufactured for:	DUANE	<u>ARNOLD</u>		PALC	), IOWA		
		(Name a	nd Addre	ess of N	œrtific	cate Holder	for compl	eted nuclear	, ipa
2.	Ιc	atification-Certificat	e Holder	s's S/N	of Part:	A5075		Nat'l Bd. N.	N/A

(a) Constructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Pete

(b) Lescription of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001

(C) applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Cla

Sheet 2 of 2

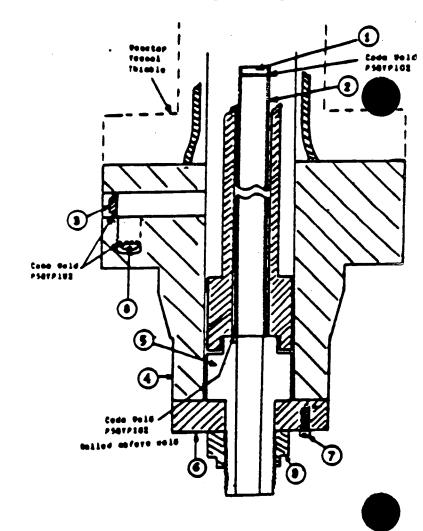
- 2. Indicator Tube 104B1336P3

  A312-TP316

  A sch 40-seamless pipe

  113 wall thickness

  065 max. dia.
- 4. lange 919D610P1 (719E474) l82-F304 37 thick x 9 5/8 OD
- 5. Frad 129B3539P3,P5 SA182-F304 1 0 OD x .884 ID
- 7. Cip Screw 117C4516P2 Sil93-B6 6 a. 1/2 dia. on 4 1/8 bolt circle
- 8. Paug 175A7961P1 Sa182-F304 0/38 thick x 1.307 dia.
- 9. Not 114B5460P1 ST193-B8A 1.30 thick x 2.62 dia.



FORM N-2 NPT CERTIFICATE BOLDERS' DATA REPORT FOR NUCLEAR PART AND APPURTENT As required by the Provision of the ASME Code Rules, Section III, Div	ANCES:
Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C.  (b) Manufactured for:  (b) Manufactured for:  (c) Name and Address of N Certificate Holder for completed nuclear of the completed nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the complete nuclear of the company	2840:
Identification-Certificate Holders's S/N of Part: A4018 Nat'1 Bd. No.	_
(a) Constructed According to Drawing No: 761E387G012 Rev 21 Dwg. Prepared by D. L.	Pete. on
(c) Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No.1361-  REMARKS: Standard part for use with Reactor. Hydrostatically tested at 1825 psi. m  (Brief description of service for which component was designed)	<u>·2</u> Cla: s_
	1 of 2
certify that the statements in this report are correct and this vessel part or application of the code conforms to the rules of construction of the ASME Code Section applicable Designed Specification and Stress Report are not the responsibility of the tificate Holder for parts. An NPT Certification Holder for appurtenances is restricted in the component Design Specification and Stress Report if the appurtenance cluded in the component Design Specification and Stress Report).	tion II.  of the IP.  consitte
TE: 5/29 ,19 90 Signed GE-NEBG-NF&CM-QA BY (NPT Certificate Holder) SOS-OA REPRESENTATION TO Authorization Expires: 6/16/90 Certification of Authorization No.: NP	
CERTIFICATION OF DESIGN FOR APPORTENANCE	
esign information on file at GE COMPANY, SAN JOSE, CALIFORNIA	
ress analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA  22A6253 Rev. 0  sign specification certified by BJORN HAABERG Prof. Eng. State CALIF. Reg. No 22A6254 Rev. 1  ress analysis report certified by EDWARD YOSHIO Prof. Eng. = CALIF. Reg. No	
CERTIFICATION OF SHOP INSPECTION	
I, the undersigned, holding a valid commission by the National Board of Boiler a dispectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTME TO STATE OF NORTH CAROLINA have inspected the part of a pressure vessel described retial Data Report on 5-27 19%, and state that to the best of mode described belief, the NPT Certificate Holder has constructed this part in accordance with the Section III.	OF L R In S nowle e the E
By signing this certificate, neither the Inspector nor his employer makes any we pressed or implied, concerning the part described in the Partial Data Report. Firth ither the Inspector nor his employer shall be liable in any manner for any personal property damages or a loss of any kind arising from or connected with this inspecti	iermc ,

ples tal sheets in form of lists, sketches or drawing may be used provided (1) size is [1", (2) information in 1-2 on this Data Report is included on each sheet and (3 tis numbered and number of sheets is recorded in Item 3. "REMARKSs"

National Board, State, Province and

Itmes 4-8 Incl. to be completed	For single well yess Nominal C	ela, jecketa vassele,	or shells of heat	exchangere,
4. Small: MaterielT.S	Thickness in A	llowence in Die.	ft. in Langth	ft. in.
(Kind & Socc.No	) (Him. ofRance Specif	iei)	·	
5. Seems: Long	_M.T. 1	R.TE ( / 1.0	:ioney	<u> </u>
Girth	_H.T. <sup>1</sup>	R.TNo. (	of Courses_	•
Girth_ 6. Heede: (e) Meterial	T.S	(b)Meterial	T.S	
Location (Top Cr	own Knuckle Elliptic	el Cancial Hamisohe	rical Flat	Side to Press.
Bottom, Ende) Thickness Rac	dius Radius Ratio	Apex Angle Radi	us Diameter	(conv.sr conc.
(e)			<del></del> .	
If recovable, belts used		Other festening	<del></del>	<del></del>
(Meteriel,Spa	c.Mo., T.S. Size Numb	or) (Dee	cribe or ettach :	katch)
. 3erver 610egia:		If ber give dimmnetons		
		Orap	Weight	LIDO OF MACCU
8. Ocaign Preseur: 2 1250		575 <b>←</b> Chen	Weight_ py Impact	u-1p
	·	<b>et</b> te	ep. of	<u>•</u>
Itame 9 and 10 to be completed f	or tube sections,	· · · · · · · · · · · · · · · · · · ·		
9 Tube Sheeter Stationery Met!	1 . 04	Thickey	40 400000	
7. The states statedly not	(Kind of Spec. No.)	(Subj.to Prees.)	(Ye	ided, Bolted)
9. Tube Sheete: Stationary Met'	010	Thickness	in. Attachment_	
10. Tubes: Meteries		2767108		
			(St	t. of U)
Items II-là incl. 13 be completed	Naminal Corre	of jacksted vessels, or	channels of hea	<u>exchangers</u>
11. Shell: MaterialT.S	_Thickness_ in. Allow	ence_ in. Dieft.	in Lanoth	re. in.
(KindaSpec.Mo.) (Hir	coffenge Specified)			_
12. Secse: Long H.T.1  Girth H.T.1  13. Heads (a) Mater al	R.T.	Efficiency	•	
GirthN.T.	R. T.	No. of Courses		
D. Haede (a) Naterial Crow	T.\$	(b)Meterial	7.5	ide to frace
(a) Top, Sottem, " criters Radi	us Radius Ratio	Apex Angle Radius	Disseter (C	conv.er Conc.)
(b)Channel If removeble, belts used (s)	- (b) (c)	Other Centerion		
	_ ''' '''		ribe or attach de	etch
		Orap 1	-	······
14. Doeign pressure2	pei at		impact	
			P. 97	
itame below to be ovapleted for a	il vessels where sopl	ceble.		
15. Safety Velve Outlote: Number_	\$120	Location		
<u> </u>	<del></del>			
16. Nezzlooi				
Purpose (Inlet Outlet, Drain) Number	Nie ee tim tim	Makaniai Phistar	Reinfercement	444
AACTAC! ACERLY WINDS.	nre et 2128 (Abs	Motoriei Thickness	Motorial	Attached
, —				· ———
17. Inepection Manholes, No	*			
Openings: Handles, No.	SizeSize	iocation		
Threeded, No	Sim_	Location		
Threaded, No	Sim	Location	AAA	
Throaded, No  18. Supporte: Shirt  Ywo er No.)  If Pectweld Heat-Treated.	Luge Lug (Number)	Location	Attached_	& How)

<sup>2</sup> List other internal ar external pressure with conincident temperature when applicable.

# FORM N-2 NPT CERTIFICATE BOILDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCE. As required by the Provision of the ASME Code Rules, Section III, Div. I

factured & Certi	fied by: GE Company	, 2117 Castle H	ayne Rd.,	Wilmington, N	.C. 28
) Manufactured for	:: Duane Arno	Name and Addres Id	ss of NPT O	ertificate Ho	1 <b>der</b> )
41	lame and Address of N	Certificate Ho.	placer for a	impleted nucl	ear comp
entification-Certi	ficate Holders's S/N	of Part: A	4018	Nat'l Bd.	N. N/
Constructed Accor	ding to Drawing No:_	761E387G012 Rev	v 21 Dwg. I	repared by D	L. Pet
Description of Pa	rt Inspected: CONTRO	OL ROD DRIVE, MO	ODEL # 7RDE	1144EG001	
Applicable ASME C	bde: Section III, Edit	ion 1974 Addend	da Data Will	15 Cara Na N	207
		23747	de Date N	J. Case No. 1	.301-5 C
				٠,	

- .. Cap 167A2343P1 SA182-F304 3/8 thick X 1 1/16 CD
- SA312-TP316
  3/4 sch 40-seamless pipe
  3 wall thickness
  5 max. dia.
- Plug 159All76Pl SA182-F304 1/4 thick x 0.812 OD
- Flange 919D610P1.(719E474) SA182-F304 3.37 thick x 9 5/8 OD

Head 129B3539P3,P5 SA182-F304 3.0 OD x .884 ID

Ring Flange 114B5122P2 SA182-F304 1° thick x 5.0 OD x 1.75 ID

Cap Screw 117C4516P2 SA193-B6 6 ea. 1/2 dia. on 4 1/8 bolt circle

Plug 175A7961P1 SA182-F304 0.38 thick x 1.307 lia.

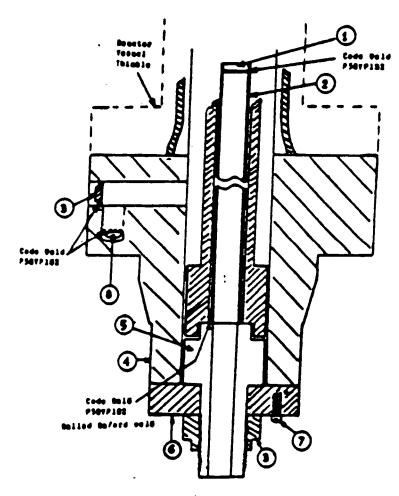
....4B5460P1 SA193-B8A

1.30 thick x 2.62 dia.

CONTROL ROD DRIVE DWG - 761E387

Sheet 2 of

<u>c)</u>



	FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART As required by the Provision of the ASME Code Rules, Sec	AND APPORTENANCE
	Manufactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmi (Name and Address of NPT Certif Manufactured for: DUANE ARNOLD PALO, IOWA (Name and Address of N Certificate Holder for comple	ed nuclear comp
2. Ic	ntification-Certificate Holders's S/N of Part: A4549	t'l Bd. No. N
	Donstructed According to Drawing No: 761E387G012 Dwg. Preps	
(b)	Description of Part Inspected: CONTROL ROD DRIVE, MODEL # 71	B144EG001 N207
(c)	Applicable ASME Code: Section III, Edition 1974, Addenda Date W'75,	ase No. 1361-2
3. RE	ARKS: Standard part for use with Reactor. Hydrostatically tested a (Brief description of service for which component was	1825 psi. min. designed)
		Sheet 1 o
is de (The Derti for f	ined in the code conforms to the rules of construction of the Applicable Designed Specification and Stress Report are not the restrate Holder for parts. An NPT Certification Holder for appurte crnishing a separate Design Specification and Stress Report if the d in the component Design Specification and Stress Report).	ME Code Section onsibility of the nces is response appurtenance i
ATE:	3/30 ,19 90 Signed GE-NEBG-NF&CM-QA By Sco-	A REPRESENTATIVE
	cate Of Authorization Expires: 6/16/90 Certification of Authoriza	
	CERTIFICATION OF DESIGN FOR APPORTENANCE	
Desig	information on file at GE COMPANY, SAN JOSE, CALIFORNIA	<b>√</b>
DC22F	analysis report on file at GE COMPANY, SAN JOSE, CALIFORNIA	
DC227	specification certified by BJORN HAABERG Prof. Eng. State CA 5254 Rev. 0.  analysis report certified by EDWARD YOSHIO Prof. Eng. State CA	
	CERTIFICATION OF SHOP INSPECTION	<del></del>
I, Insp∈	he undersigned, holding a valid commission by the National Board of tors and/or the State or Province of NORTH CAROLINA and employed by	Boiler and Pres

I, he undersigned, holding a valid commission by the National Board of Boiler and Pres Inspectors and/or the State or Province of NORTH CAROLINA and employed by DEPARTMENT OF L of TATE OF NORTH CAROLINA have inspected the part of a pressure vest of described in Partial Data Report on 3/20 1970, and state that to the best of my knowleand bilief, the NPT Certificate Holder has constructed this part in accordance with the Code section III.

By signing this certificate, neither the Inspector nor his employer makes any warra expressed or implied, concerning the part described in the Partial Data Report. Furthern neither the Inspector nor his employer shall be liable in any manner for any personal injor property damages or a loss of any kind arising from or connected with this inspection.

ATE 3/30,1990 O O P P NC 1231

Inspector's Signature National Board, State, Province and

pplemental sheets in form of lists, sketches or drawing may be used provided (1) -1/2 X ll", (2) information in 1-2 on this Data Report is included on each sheet, each sheet is numbered and number of sheets is recorded in Item 3. "REMARKSS"

teme 4-8 Incl			Nominal	Cal	rrosion			
. Shell: Mat	erial	T.S.	Thickness	in. All	lovence M	Dia. ft	. in. cen	gthftin
. 30111	(Kind & S	oec.Ha) (	in often	Specific	<b></b>			Y ''' ' '
Seeme : Lan	3	H.1	1.1	R.	.T	Efficie	ncy	2
Gir Heeda: (a)	th	N.	7.1	R.	.T.	No. af	Courses	•
Handa: (a)	Metarial		1.5		(b)Meteria	1	T.S.	
				·	<del></del>			<del></del>
Location (Io	•	Crown	Knuckle	Elliptica	al Conciel	Hemischeri	cal flat	Side to Pres
								(conv.or con
•					_			(00)
a)					•		_ — —	<del></del>
If removable	bolts used	i ——		<del></del>	Other fast	ening		
	(Metori	al ,Spec .N	la., T.S.	Sizo Numbe	<u>.e</u> )	(Deect:	be or stte	h sketch)
Jacket Clos	Sure!		•			•-		,
	(Describe	<b>65</b> 0000	and weld,	bor, etc. I	f ber give d	iemnaiona, i	f bolta, de	ecribo or sheto
	•	•	•	•	•		ight	
Design Pres	seure 2. ]	250	pei	et 5	75 <b>4</b>	Cherpy	Impact	R-16
-			,			at team	. of	
eme 9 and 10	te bo compl	ated for	tube sect	ions,				
Tube Sheats	: Stetioner	y Met'l.		Dia	•	Thickness	in Aite	heent
		(K	and of Sou	c. No.)	(Subj.to Pres	<b>88.</b> )	-	heent (Welded, Bolted t
	floating. H	eterial	- •	010.	Thi	ckness in	. Attac: mm	t
					inches			`
. Tubea: Mate	rial	0.1	D. 10.	Thickness	ar ga	om. Number	Type	•
						-		(42)
					·			(344 ) 41 0/
. Shell: Mato		Mai 5Th	nimal ickness	Corros in. Allows	-1			
. Smell: Meto (Ki	rialT. nd&Spec.Ma.	No. Thi (Hin. of	minel ickness Mange Spe	Corros in, Allows cified)	rian incein. Di	n	inLargth	nin.
. Shell: Mato (Ki	rialT. nd&Spec.Ma.	No. Thi (Hin. of	minel ickness Mange Spe	Corros in, Allows cified)	rian incein. Di	n	inLargth	nin.
. Shell: Mato (Ki	rialT. nd&Spec.Ma.	No. Thi (Hin. of	minel ickness Mange Spe	Corros in, Allows cified)	rian incein. Di	n	inLargth	nin.
. Shell: Meto (Ki . Sesem: Long Girth . Heads (a) N	rialT. nd&Spec.MeHHH	SThi ) (Hin. of	ninel Ickness TRange Spe R.T T.	Corror in Allowa icified)  E	icon incein. Di Officiancy_ ib. of Course (b)Na	e	inLerath	ftin.
. Shell: Meto (Ki . Sesem: Long Girth . Heads (a) M .ocstion	rielT. nd&Spec.MeHHH, steriel	S. Thi ) (Hin. of	ninel lcknessR.TR.T	Corror in. Allows cified)  E S Elliptical	orion  Ifficiency  ib. of Course  (b)Ma  Conciel	eft	in_Lergth	ftin.
. Shell: Meto (Ki . Seams: Long Girth . Heads (a) M .acstion	rielT. nd&Spec.MeHHH, steriel	S. Thi ) (Hin. of	ninel lcknessR.TR.T	Corror in. Allows cified)  E S Elliptical	orion  Ifficiency  ib. of Course  (b)Ma  Conciel	eft	in_Lergth	ftin.
. Shell: Meto (Ki . Seamm: Long Girth . Heads (a) M .acetion .)Top, Bottes End	rielT. nd&Spec.MeHHH, steriel	S. Thi ) (Hin. of	ninel lcknessR.TR.T	Corror in. Allows cified)  E S Elliptical	orion  Ifficiency  ib. of Course  (b)Ma  Conciel	eft	in_Lergth	ftin.
. Shell: Meto (Ki . Seems: Long Girth . Heeds (a) M .acetion .)Top, Bottes End	rielT. nd&Spec.MeHHH, steriel	S. Thi ) (Hin. of	ninel lcknessR.TR.T	Corror in. Allows cified)  E S Elliptical	orion  Ifficiency  ib. of Course  (b)Ma  Conciel	eft	in_Lergth	ftin.
Shell: Mato (Ki . Seems: Long Girth . Heads (a) M .ocstion .)Top, Bottes End .)Channel	rialT. nd&Spec.Me.  M. H. sterial, Ticnkese	No. Thi (Nin. of T.1 T. Crown Redius	Rinel Ickness /Range Spe R.T. R.T. Knucla Redius	Corros in Allows cified)  Elliptical Retia	orion in. Di  Officiency  Io. of Course  (b) Ma  Conciel  Apex Angle	e	in_Lergth	ftin.
. Shell: Meto (Ki . Seamm: Long Girth . Heads (a) M .ecstion a) Top, Bottes	rialT. nd&Spec.Me.  M. H. sterial, Ticnkese	No. Thi (Hin. of T.1 T. Crown Redius	Rinel Ickness /Range Spe R.T. R.T. Knucla Redius	Corros in Allows cified)  Elliptical Retia	orion in. Di  Officiency  Io. of Course  (b) Ma  Conciel  Apex Angle	tarial_ Hamispheric Redius	in_Lergth	.Sin. Sido to Prese (Conv. or Conc.
. Shell: Mato (Ki . Seams: Long Girth . Heads (a) M .ocstion a) Top, Botton End	rialT. nd&Spec.Me.  M. H. sterial, Ticnkese	No. Thi (Hin. of T.1 T. Crown Redius	Rinel Ickness /Range Spe R.T. R.T. Knucla Redius	Corros in Allows cified)  Elliptical Retia	orion in. Di  Officiency  Io. of Course  (b) Ma  Conciel  Apex Angle	tarial_ Hamispheric Redius	inLargth	.Sin. Sido to Prese (Conv.or Cone.
Shell: Meto (Ki Sease: Long Girth Heeds (a) M ocstion ()Top, Bottes End ()Channel removable, bo	rialT. nd&Spec.MeHH, sterial, Ticnkese	No. Thi (Hin. of T.1 T. Crown Redius	Rinel Ickness /Range Spe R.T. R.T. Knucla Redius	Corros in Allows cified)  Elliptical Retia	orion in. Di  Officiency  Io. of Course  (b) Ma  Conciel  Apex Angle	tarial_ Hamispheric Redius	in_Leroth	ftin.  I.S Sido to Presi (Conv.or Conc.
Shell: Mato (Ki Seams: Long Girth Heads (a) M scation )Top, Bottes End )Channel removable, bo	rialT. nd&Spec.MeHH, sterial, Ticnkese	No. Thi (Hin. of T.1 T. Crown Redius	Rinel Ickness /Range Spe R.T. R.T. Knucla Redius	Corror in. Allows icified)  S. Elliptical Retia	orion in. Di  Officiency  Io. of Course  (b) Ma  Conciel  Apex Angle	terial Hamispheric Redius (Doscrib	Leroth  S  S  Olas tas  o as struch  ght  apact	ftin.  I.S Sido to Presi (Conv.or Conc.
Shell: Mato (Ki Seam: Long Girth Heads (a) M oration )Top, Bottes End )Channel removable, bo	rial T. nd&Spec.Me.  H  Steriel  Ticnkese olto used (a	S. Thi ) (Hin. of .T.1 .T.1 Crown Redius	R.T. R.T. Knucla Redius	Corror in. Allows icified)  S. Elliptical Retia  (c)  at	officiency  in. Di  Officiency  ib. of Course  (b)Ma  Conciel  Apex Angla  Other Feeter	terial Hamispheric Redius (Doscrib Orop Wai Charpy I	Leroth  S  S  Olas tas  o as struch  ght  apact	ftin.  I.S Sido to Presi (Conv.or Conc.)  akatch
Shell: Mato (Ki Seam: Long Girth Heads (a) M oration )Top, Bottes End )Channel removable, bo	rial T. nd&Spec.Me.  H  Steriel  Ticnkese olto used (a	S. Thi ) (Hin. of .T.1 .T.1 Crown Redius	R.TR.TT. Knucla Redius	Corror in. Allows icified)  S. Elliptical Retia  (c)  at	officiency  in. Di  Officiency  ib. of Course  (b)Ma  Conciel  Apex Angla  Other Feeter	terial Hamispheric Redius (Doscrib Orop Wai Charpy I	Leroth  S  S  Olas tas  o as struch  ght  apact	ftin.  I.S Sido to Presi (Conv.or Conc.)  akatch
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Shell: Meto (Ki . Seasm: Long Girth . Heeds (a) M .ocetion a)Top, Bottes End a)Channel removable, be Dowign press se bolow to t Sefety Valve Mezzles: Purpose (Ini	rial T. rd&Spec.Me.  H sterial H. sterial Control of to used (s	S. Thi ) (Hin. of  T.1  Crown Redius  ))  for ell  umber	ickness /Range SpeR.TR.TT. Knucla Rediustable or Size	Corror in. Allows cified)  S. Elliptical Retia  (c)  Size  Type	Conciel Apex Angle Other Frete	ning (Docrib Orop Wai Charpy I at temp.	Lerath  S  ol Fel  Dies ter  e or ethech  apact  of	ftin.  I.Ssido to Prese. (Conv.or Conc.)  ekatch ft-lb
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Shell: Meto (Ki Seam: Long Girth Heede (a) M ocation )Top, Bottes End )Channel removable, be Dowign press  Sefaty Valve Mozzlaa: Purpose (Ini Outlet, Drai	rial T. rd&Spec.Me.  H sterial H. sterial Control of to used (s	Crown Radius  for ell  umber  ber  D:	ickness /Range SpeR.TR.TT. Knucla Rediustable or Size	Corror in. Allows icified)  S. Elliptical Retia  (c)  Size  Type  20 20	Conciel Apex Angle Other Feete	ning (Docrib Orop Wai Charpy I at temp.	Lerath  S  ol Fel  Dies ter  e or ethech  apact  of	ftin.  I.Ssido to Prese. (Conv.or Conc.)  ekatch ft-lb
Shell: Meto (Ki Seam: Long Girth Heede (a) M acetion )Top, Bottes End )Chennel removable, be Dowign press  Sefaty Valve Mazzlea: Purpose (Ini Outlet, Drai	rial T. rd&Spec.Me.  Haterial H. sterial Carlese  plto used (a  nure <sup>2</sup> Dutlete: N  et n) Hum  Hanholse,   Handlee,   Threused,	Crown Redium  for all  umber  ber  D:	ickness /Range SpeR.TR.TT. Knucla RediusSiSiSi	Corror in. Allows icified)  S. Elliptical Retia  (c)  Size  Type  20 20	icon incein. Di  ifficiency_ io. of Course	e	Lerath  S  ol Fel  Dies ter  e or ethech  apact  of	ftin.  I.SSido to Prese (Conv.or Conc.  ekatchft-lb

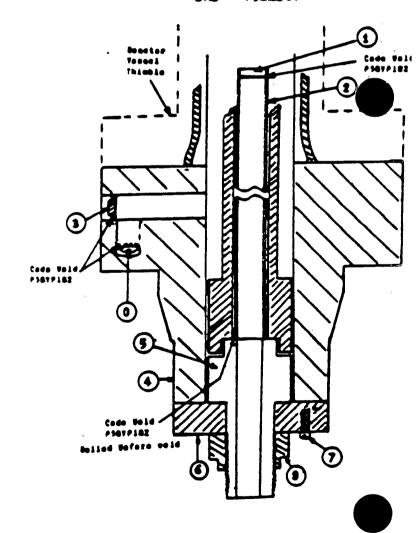
<sup>2</sup> List other internal or axternal pressure with conincident temperature when applicable.

# FORM N-2 NPT CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PART AND APPORTENANCES' As required by the Provision of the ASME Code Rules, Section III, Div. I

. Mia	contactured & Certified by: GE Company, 2117 Castle Hayne Rd., Wilmington, N.C. 2840
(L	(Name and Address of NPT Certificate Holder) Manufactured for:  DUANE ARNOLD  PALO, IOWA  52324  (Name and Address of N Certificate Holder for completed nuclear appointment of the complete o
2. Ic	tification-Certificate Holders's S/N of Part: A4549 Nat'l Bd. N. N/A
(a)	onstructed According to Drawing No: 761E387G012 Dwg. Prepared by D. L. Pete
(b)	escription of Part Inspected: CONTROL ROD DRIVE, MODEL # 7RDB144EG001
(C)	opplicable ASME Code: Section III, Edition 1974, Addenda Date W'75, Case No. 1361-2 Cl

Sheet 2 of 2

- 2. Endicator Tube 104B1336P3
  SA312-TP316
  1/4 sch 40-seamless pipe
  113 wall thickness
  1065 max. dia.
- 3. Fig 159All76Pl 5-182-F304 F4 thick x 0.812 OD
- 4. Frange 919D610P1 (719E474) 6:182-F304 1:37 thick x 9 5/8 OD
- 5. Fad 129B3539P3,P5 SA182-F304 D.J OD x .884 ID
- 6. Fing Flange 114B5122P2 S\182-F304. 1" thick x 5.0 OD x 1.75 ID
- 7. G:p Screw 117C4516P2 5:193-B6 6:0a. 1/2 dia. on 4 1/8 bolt circle
- 8. Piug 175A7961P1 Sal82-F304 0.38 thick x 1.307 dia.
- SA193-B8A 1.30 thick x 2.62 dia.



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

	Owner <u>Iowa Ele</u>	ectric Light and Po Name	wer		Date <u>Septem</u>	ber 6,	1990	
	P.O.Box 351,	Cedar Rapids, IA 5			Sheet <u>1 of</u>	2		
		Address						
: <b>.</b>	Plant <u>Duane Ar</u>	rnold Energy Center Name		· <del></del>	Unit <u>1</u>			
	7277 0450 04	Dala 14 5373/				O140 #4	02047	
	Addre	<u>Palo, IA 52324</u> Ss				CMAR #A	02913 Organization P.O.	No., Job No.
	Work Performed	by <u>Iowa Electric</u>			Type Code Symbol	Stamp_	None	
		Name			Authorization No.		None	
	3277 DAEC ROS	nd Palo, IA 52324 Address		<del></del>	Expiration Date		None	
	Identification	of System <u>Recir</u>	c_Riser "F" ,	line 1" DCA	19 (class 2)			
								-
·.		Const. Code ANSI B	31.7	19 <u>69</u>	Edition,		Addenda,	<u>N/A</u> Co
	Case (b)Applicable	Edition of Section	XI Utilized f	or Repairs	or Replacements 19	80 W81		
	.,	•						
	Identification	of Components Rep	mired or Repla	ced and Rep	acement Component	s		
	, , , , , , , , , , , , , , , , , , , ,			National			Repaired	ASME Code
	Name of Component	Name of Manufacture	Manufacturer Serial No.	Board No.	Other Identification	Year Built	Replaced, or Replacement	Stamped (Yes or No)
							Replaced,	Stamped (Yes
Socket							Replaced,	Stamped (Yes
Socket	Component	Manufacture	Serial No.	No.	Identification	Built	Replaced, or Replacement	Stamped (Yes or No)
Socket	Component	Manufacture	Serial No.	No.	Identification	Built	Replaced, or Replacement	Stamped (Yes or No)
Socket	Component	Manufacture	Serial No.	No.	Identification	Built	Replaced, or Replacement	Stamped (Yes or No)
Socket	Component	Manufacture	Serial No.	No.	Identification	Built	Replaced, or Replacement	Stamped (Yes or No)
Socket	Component	Manufacture	Serial No.	No.	Identification	Built	Replaced, or Replacement	Stamped (Yes or No)
	Weld 4F3	Manufacture  Bechtel	Serial No.	No.	Identification	Built	Replaced, or Replacement	Stamped (Yes or No)
	Weld 4F3  Description of	Manufacture  Bechtel  Work Wold repair	Serial No.	No.	Identification	Built	Replaced, or Replacement	Stamped (Yes or No)
•	Weld 4F3	Manufacture  Bechtel  Work Wold repair	Serial No.	No.	Identification	1990	Replaced, or Replacement	Stamped (Yes or No)
Socket	Weld 4F3  Description of	Manufacture  Bechtel  Work Wold repair	n/a  of 1" socket	No.	Identification	1990 Operatio	Replaced, or Replacement	Stamped (Yes or No)

the number of sheets is recorded at the top of this form.

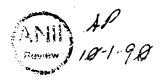


FORM NIS-2 (Back) sheet 2 of 2

				<u>·                                      </u>
	<del></del>			
	•	CERTIFICATE OF COMP	IANCE	
We certify to the rules of	that the statements made in the ASME Code, Section XI.	the report are corr		ir creplacement
Type Code S	Symbol Stamp <u>None</u>			
Certificate	of Authorization No. No.	one		Expiration Date
Signed Own	under Shar er or Owner's Designee, Titl	Codes & Ma	terials, TGL Date	9-6-
	CERTI	FICATE OF INSERVICE	INSPECTION	
Inspectors and t	ned, holding a velid commi- he State or Province of Hartford, Connect	lowa icut	and employed by have inspected	<u>Hartford Steam Boiler</u> ed the components descr
, and state that	ort during the period to the best of my knowledge ed in the Owner's Report in	and belief, the Owne	r has performed exam	minations and taken cor e ASME Code, Section X
concerning the e	is certificate neither the lexaminations and corrective magnetic semployer shall be liable in from or connected with this	measures described i in any manner for an	n this Owner's Repo	rt. Furthermore, neit
- Sec	M Grullon ors Signature	Commissions	NB 8829(I)(N) 94	1-IA
inspecto	ors Signature	•	iational Board, Stat	te, Province, and Endor

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

	Owner <u>Iowa Elec</u>	tric Light and Pow	ver		Date <u>Septem</u>	ber 10 1	990		
	P.O.Box 351, C	edar Rapids, IA 52 Address	2406	···.	Sheet <u>1 of</u>	2			
2.	Plant Duane Arn	old Energy Center	·	· <del></del>	Unit 1				
		Name							
	3277 DAEC Rd. Address	Palo, IA 52324		<del></del>		CMAR #9	1523 Organization P.O.	No.,Job No	_ o.
3.	Work Performed	by Iowe Electric			Type Code Symbol	Stamp_	None	ŕ	
		Name			Authorization No.	•	None	·	
	3277 DAEC Roed	Palo, IA 52324 Address	<del></del>		Expiration Date		None		· —
<b>.</b>	Identification	of System <u>React</u>	or Vess <b>e</b> l Ver	nt Flange N7	Nozzle (class 1)				
<b>5.</b>	(a)Applicable Co	onst. Code ANSI B	31,7	19_6 <b>9</b>	Edition,		Addenda,	N/A	Code
		dition of Section	XI Utilized f	or Repoirs	or Replacements 19	80 W81	_		
•	Identification (	of Components Repa	ired or Repla	nced and Rept	acement Component	s			
	Name of Component	Name of Msnufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)	
N7 vent	: flange	C B & I	39-1	N/A	Vessel 17201	1969	REPAIRED	YES	
			·					123	
	T-171								
•	Description of W	Jork <u>Machined fla</u>	nge for bette	r fit.			-		
	Tests Conducted:	Hydrostatic	Pneus	matic [	Nominal C	<b>Ope</b> ration	n Pressure	×	
		Other	Pressure	1026	psi Test Tem	p	206°F		
	III.,(2)INTORMOTI	al sheets in form on in items 1 thro eets is recorded	ough 6 on this	s report is	rawinga may be use included on each :	ed, prov sheet, a	ided (1) size is nd (3) each sheet	8½ in. x is numbe	11 red an



#### FORM NIS-2 (Back)

sheet 2 of 2

rough mat	ing surface. VT-2 was performed under	er ISI no. 89-13 and was accepta	able.
			-
_		CERTIFICATE OF COMPLIANCE	
	certify that the statements made in	the report are correct and this	
to the	rules of the ASME Code, Section XI.	-	repair or replacement
<b>.</b>	no Code Cumbol Chara		
' <sup>y</sup>	pe Code Symbol Stamp <u>None</u>		
Ca	rtificate of Authorization NoN	ons	Expiration Date
Si	gned Sumulu Shauf Owner or Owner's Designee, Til	Codes & Materials, TG	L Date 9-26-
	Owner or Owner's Designee, Tit	le	
L			
	CERTI	FICATE OF INSERVICE INSPECTION	
I, the	undersigned, holding a valid commi	ssion issued by the National	Board of Boiler and Pressure \
Inspect	ors and the State or Province of	lowe and empl	oyed by Hartford Steam Boiler
this Ow	of <u>Hartford, Connect</u> men's Report during the period	S S S D	to 13-1-92
, and st	ate that to the best of my knowledge s described in the Owner's Report in	and belief, the Owner has perfo	rmed examinations and taken corre
	igning this certificate neither the ing the examinations and corrective :		
Inspect	or nor his employer shall be liable i	in a <mark>ny menner for any personal</mark> i	
any kin	d arising from or connected with this	•	
	Inspectors Signature	Commissions NB 8829(1	)(N) 941-IA
	and the second of the second o	Macronal 508	aid, State, Flovince, and Engorse
Date	Oct. / 19 90		
	· · · · · · · · · · · · · · · · · · ·		

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

1.	Owner <u>lowa Elec</u>	tric Light and Po	mer		Date <u>Novemb</u>	er 9, 19	990		
	P.O.Box 351, C	edar Rapids, IA 5		· · · · · · · · · · · · · · · · · · ·	Sheet <u>1 of</u>	2			
	<b>01 0 1</b>								
•	Plant Duane Arn	old Energy Center Name	•		Unit1				
	3277 DAEC Rd.	Palo, IA 52324				PMAR #1	043329. P.O. F166	72	
	Address					Repoir	Organization P.O.	No.,Job No	<del>.</del>
•	Work Performed I	by <u>Iowa Electric</u>			Type Code Symbol	Stamp	None		
		Name			Authorization No		None		
			•						
	3277 DAEC Roed	Palo, IA 52324 Address		<del>:</del>	Expiration Date		None		
	ldombišionsi				15 24 224 2 4 4				
•	identification (	or system <u>need</u>	vent (ine rta	inge (tower)	line 2" DBA-9 (cl	ass 1)	"Item 5 on FSK-4	4042"	
•	(a)Applicable Co	onst. Code ANSI B	31.7	1 <b>9</b> 69	Edition,n/	a	Addenda	N/A	Code
	Cas <b>e</b>				or Replacements 19				
	(p)\(\rightarrow\)	ition of section	AL UTILIZED 1	or <b>kepoirs</b>	or keptacements 19	80 W81	<del>_</del> ·		
	Identification of	of Components Rep	oired or Repla	ced and Rep	lacement Component	9			
		•				<u> </u>		·	
								ASME	
	Name of	Name of	Manufacturer	National Board	Other	Year	Repaired Replaced,	Code Stamped	
	Component	Manufacture	Serial No.	No.	Identification	Built	or Replacement	(Yes or No)	
								0. 10,	
			Ht Code				ļ-		
stud	is	Daniel Bolt	217 Ht Code	N/A	2" DBA-9	1973	Replacement	No	
6 nut	:s	Daniel Bolt	312	N/A	2" DBA-9	1973	Replacement	No	
					1				
			<u> </u>		<u> </u>		1	<u> </u>	
	Description of W	ork <u>Replaced st</u>	uds and nuts.						
	,								
	Tests Conducted:	Hydrostatic	Pneur	matic	Hominal C	peratio	n Pressure		
		Other	Pressure	n/a	psi Test Tam	p	n/a °F	- <del></del>	
				<del></del>	<del>-</del> -			•	
	NOTE: Supplement:	al sheets in form	of lists, sk	etches, or d	rawi <b>ngs me</b> y be us	ed, prov	ided_(1) size is	8½ in. x	11
	the number of she	eets is racorded	at the top of	this form.	included on each	sheet, a	nd (3) each sheet	is numbe	red an

113-30

FORM NIS-2 (Back)

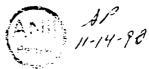
sheet 2 of 2

unites to touch the UT. 1 commissions for the past and cal	ing autom
written to tract the VT-1 requirements for the next refuel	ing outage.
ا المسلوبية و المسلوبية و المسلوبية و المسلوبية و المسلوبية و المسلوبية و المسلوبية و المسلوبية و المسلوبية و 	
CERTIFICATE OF COMPL	IANCE
We certify that the statements made in the report are corre	ect and this <u>replacement</u> c
to the rules of the ASME Code, Section XI.	repair or replacement
Type Code Symbol Stamp None	· 
, , ,	
Certificate of Authorization No. None	Expiration Date
CZP	1, , , 2
Signed Sharfor Codes & Mar Owner or Owner's Designee, Title	terials, TGL Date
onici of onici sociation, inte	
CERTIFICATE OF INSERVICE	INSPECTION
I, the undersigned, holding a valid commission issued by the Inspectors and the State or Province of of of Martford, Connecticut	and employed by Hartford Steam Boiler
this Owner's Report during the pariod 9-2-90	to 11-13-80
, and state that to the best of my knowledge and belief, the Owner measures described in the Owner's Report in accordance with the	r has performed examinations and taken cor
·	•
By signing this certificate neither the Inspector nor his em concerning the examinations and corractive measures described in	ployer mekes any warranty, expressed or in n this Owner's Report. Furthermore, neith
Inspector nor his employer shall be liable in any menner for any any kind arising from or cannected with this inspection.	personal injury or property damage or a
Inspectors Signature Commissions	NB 8829(I)(N) 941-IA ationel Board, State, Province, and Endors
Date Nove 13 19 90	

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

	OMUNEL TOWN EVE	ectric Light and Po Name	Her		Date <u>Septem</u>	<u>ber 10,</u>	1990	
	P.O.Box 351,	Cedar Rapids, IA 5	2406		Sheet <u>1 of</u>	2		
		Address			*			
	Plant Duane Ar	nold Energy Center Name			Unit 1			<del>" </del>
	2077							
	32// DAEC Rd.	<u>Palo, IA 52324</u> BS		<del> </del>	<del></del>	CMAR #9	3919 (EMA) Organization P.O.	No., Job No.
	Work Performed	by Iowa Electric			Type Code Symbol	Stamo	None	·
		Name	*		Authorization No.			
					Authorization No.		попе	
	3277 DAEC Roa	d Palo, IA 52324			Expiration Date		None	
		Address						
	Identification	of System <u>React</u>	tor Vessel ven	t line 2"DB/	N-9 (class 1)			
						_		
	(a)Applicable Case (valve) C	Const. Code <u>ASME Se</u> onst. Code for pipi	ection III ing B 31.7. 19	19 <u>71</u> 67 Edition	Edition,S 1969 Addenda class	71	_Addenda,	<u>N/A</u> (
	(b)Applicable	Edition of Section	XI Utilized f	or Repairs	or Replacements 19	80 W81	<del></del>	
		·						
	Identification	of Components Repa	nired or Repla	ced and Repi	acement Component	s		
								ASME
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification,	Year Built	Repaired Replaced, or Replacement	Code Stamped (Yes or No)
ve V				Board			Replaced,	Code Stamped (Yes
	Component	Manufacture	Serial No.  n/a  EA742-3-1	Board No.	Identification,	Built	Replaced, or Replacement	Code Stamped (Yes or No)
ve V	7-14-006	Manufacture Rockwell	Serial No.	Board No.	Identification	Built 1972	Replaced, or Replacement	Code Stamped (Yes or No)
ve V	/-14-006	Manufacture  Rockwell  Anchor	n/a EA742-3-1	Board No. n/a N/A	Identification  2# CCA-GB  2# CCA-GT	1972 1988	Replaced, or Replacement Replaced Replacement	Code Stamped (Yes or No)  Yes  YES
ve V	/-14-006 /-14-006	Rockwell Anchor Tioga Pipe Co.	n/a EA742-3-1 HT# L61715	Board No. n/a N/A	Identification / 2" CCA-GB 2" CCA-GT 2" DBA-9	1972 1988 1990	Replaced, or Replacement  Replaced  Replacement  Replacement	Code Stamped (Yes or No)  Yes  YES  NO
pipe	/-14-006 /-14-006	Rockwell Anchor Tioga Pipe Co.	n/a EA742-3-1 HT# L61715	Board No. n/a N/A	Identification / 2" CCA-GB 2" CCA-GT 2" DBA-9	1972 1988 1990	Replaced, or Replacement  Replaced  Replacement  Replacement	Code Stamped (Yes or No)  Yes  YES  NO
pipe dds W	7-14-006 7-14-006 8-14-006 8-132, W33, W34 8-14-14-14-14-14-14-14-14-14-14-14-14-14-	Rockwell Anchor Tioga Pipe Co.	n/a EA742-3-1 HT# L61715 N/A	Board No. n/a N/A	Identification / 2" CCA-GB 2" CCA-GT 2" DBA-9	1972 1988 1990	Replaced, or Replacement  Replaced  Replacement  Replacement	Code Stamped (Yes or No)  Yes  YES  NO
pipe lds W 5,W36	7-14-006 7-14-006 7-14-006 7-14-006 7-14-008 7-14-008 7-14-008	Rockwell Anchor Tioga Pipe Co. Iowa Electric	n/a EA742-3-1 HT# L61715 N/A	n/a n/A n/A	Identification / 2" CCA-GB 2" CCA-GT 2" DBA-9	1972 1988 1990	Replaced, or Replacement  Replaced  Replacement  Replacement	Code Stamped (Yes or No)  Yes  YES  NO
pipe lds W 5,W36	7-14-006 7-14-006 7-14-006 8-132, W33, W34 9-133, W34 9-133, W38	Rockwell Anchor Tioga Pipe Co. Iowa Electric	n/a EA742-3-1 HT# L61715 N/A e V-14-6	n/a N/A N/A N/A	Identification / 2" CCA-GB 2" CCA-GT 2" DBA-9	1972 1988 1990	Replaced, or Replacement  Replaced  Replacement  Replacement	Code Stamped (Yes or No)  Yes  YES  NO
pipe lds W 5, W36	7-14-006 7-14-006 7-14-006 7-14-006 7-14-008 7-14-008 7-14-008	Rockwell Anchor Tioga Pipe Co. Iowa Electric weld to class1 valve Work Replaced val	n/a EA742-3-1 HT# L61715 N/A	n/a N/A N/A N/A	Identification / 2" CCA-GB 2" CCA-GT 2" DBA-9 2" DBA-9	1972 1988 1990 1990	Replaced, or Replacement  Replaced  Replacement  Replacement	Code Stamped (Yes or No)  Yes  YES  NO
pipe lds W 5,W36	7-14-006 7-14-006 7-14-006 8-132, W33, W34 9-133, W34 9-133, W38	Rockwell  Anchor  Tioga Pipe Co.  Iowa Electric  Work Replaced val	n/a EA742-3-1 HT# L61715 N/A  e V-14-6	n/a N/A N/A N/A	Identification / 2" CCA-GB 2" CCA-GT 2" DBA-9 2" DBA-9	1972 1988 1990 1990	Replaced, or Replacement  Replaced  Replacement  Replacement	Code Stamped (Yes or No)  Yes  YES  NO

the number of sheets is recorded at the tep of this form.



	Replaced valve due to extreme bypass leakage. Performed PT on welds. VT-2 with Hydrostatic test under ISI Applicable Manufacturer's Data Reports to be attached
port	number 90-360 and 89-13 (see NIS2 10-90-40 for further details)
	CERTIFICATE OF COMPLIANCE
	We certify that the statements made in the report are correct and this <u>replacement</u> conforms
	e rules of the ASME Code, Section XI. repair or replacement
1	Type Code Symbol Stamp None
	Certificate of Authorization No. <u>None</u> Expiration Date
,	
9	Signed Shauga Codes & Materials, TGL Date 11-13- , 19 90 Owner or Owner's Designée, Title
•	Owner or Owner's Designée, Title
	CERTIFICATE OF INSERVICE INSPECTION
I, th	e undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel
	of Hartford, Connecticut and employed by Hartford Steam Boiler 1&1 Co
this	Owner's Report during the period 5-/3 / C to to state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective
measul	res described in the Owner's Report in accordance with the requirements of the ASME Code, Section XI.
87	signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied,
conce	rning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the ctor nor his employer shall be liable in any manner for any personal injury or property damage or a loss of
any k	ind arising from or connected with this inspection.
	Commissions NB 8829(I)(N) 941-IA
	Inspectors Signature Commissions NB 8829(I)(N) 941-IA  National Board, State, Province, and Endorsements
	100 1419 90
Date_	1970 1719 10

		Mark No.	Material Spec. No.	Manufacturer	Remarks
	.(c)	Bolting			
	•	N/A			
_		44.0			
O.					
0		•	· · · · · · · · · · · · · · · · · · ·		
	(4)	Other Parts		<b></b>	
0	(4)	Disc HT. #9563	AMS-5387A	Deloro Stellite,	Inc.
		D13C 111.#3303	7113 33077	551010 55511156,	
-					
0					
_		<u> </u>			
0					- I
		5400			
1	8. Hydro	pstatic testpsi.	•		
1			<del></del>		
		CI	ERTIFICATION OF I	DESIGN	
		A	V. 3 0 V	2112 DA 11	7701
	Design	information on file at Anchor/Darli	ng valve Co., w	illiamsport, PA 1.	7/01
	Stress	analysis report on file at Anchor/Day	ling Valve Co.,	Williamsport, PA	1//01
	Design	a specifications certified by R.S.Po analysis report certified by R.S.Fa	well	(1) Prof. Eng. State	A Reg. No. 14420
	Scress	analysis report certified by R. S. Fa	rrell	(1) Prof. Eng. State	PA Reg. No. 35216-E
		nature not required. List name only.		-	
					•
j	We cer	tify that the statements made in this repor	t are correct.		
Ì				$\alpha \circ \alpha$	2++
İ	Date_	9 27 19 88 Signed Ar	<u>chor/Darling Va</u>	Ive Co.By 75 3->	danneu,
			(Manufacturer)		
	Certifi	case of Authorization No. N1712	expires 4/15/89		
ļ					
		CERTIE	FICATE OF SHOP IN	SPECTION	
		CERTII	TCATE OF SHOP IN	Sr ECTION	
ŀ	, ,	he wednesiased beldies a welld semilier	and the second that the second	and Brand of Bullion and B	
		he undersigned, holding a valid commission the State of Pennsylva	nia	nai board of boller and Pr	<u>Jnion Insurance Co.</u>
- 1	of	Boston, Mass.	•	• • • • • • • • • • • • • • • • • • • •	
	Report	215-6 052 00		ave inspected the equipme	
	has co	astructed this equipment in accordance wi	th the applicable Subse	best of my knowledge and ctions of ASME Code. Sec	rian III.
	Вy	signing this certificate, neither the inspe	ector not his employer	makes any warranty, expre	seed or implied concerns :
	manner	equipment described in this Data Report. for any personal injury or property damage	Furthermore, neither t	he Inspector nor his emplo	yer shall be liable in any
l		the same and the free free free free free free free fr	- 0 1003 01 4117 21114	mising from or connected	with this mapeetion.
1					·
- 1			•	•	l
1	Date_	9-27 1988		-	
-,	Date_	19_55	<del></del>		
Í			•	•	1
1	_				
لم :		Hen le Chris		<b>0</b>	200
		(Inspector)	Commissions	Pennsylvania 2	
	Cha	rles Young		(National Board, State,	Province and No.)
	7.14			<del></del>	

١.	Owner <u>Iowa Elec</u>	tric Light and Pow Name	ier		Date <u>Septem</u>	per 10,	1990		
	P.O.Box 351, C	edar Rapids, IA 52	2406		Sheet <u>1 of</u>	2			
		Address							
·	Plant Duane Arn	old Energy Center Neme			Unit1				
	3377 NAEC 84	Palo, IA 52324				CMVD 40.	ROOR (FMA)		
	Address	FACO, IN 32324				Repair (	organization P.O.	lo.,Job No	<u>-</u> .
•	Work Performed	by <u>Iowa Electric</u>		<u> </u>	Type Code Symbol	Stamp	None		
		Name			Authorization No.		None		
	3277 DAEC Roed	Palo, IA 52324	<del></del>		Expiration Date _		None		
		Address							
•	Identification	of System <u>React</u>	or Vessel ven	t line 2"DB/	N-9 (class 1)				
	(a)Amaliaabla C	onst. Code <u>ASME</u> Se	nation III	10 71	Édition S	71	Addanda	N/A	cod
•	Case (valve)						_	N/A	
	(b)Applicable E	dition of Section	XI Utilized f	or Repairs o	or Replacements 19	80 W81	<del></del>		
	Identification	of Components Repa	ired or Peols	cad and Pan	acement Component	c			
•	- Toerici Toacion	or components keps	THE OF REPLA	ced und kep	COOLINE COMPONENTE				
	Neme of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)	
Valve V	<i>1-</i> 14-005	Rockwell	n/a	n/a	2" CCA-GB	1972	Replaced	Yes	
Valve V	r-14-005	Anchor	EA742-3-2	N/A	2" CCA-GT	1988	Replacement	YES	
2" pipe		Tioga Pipe Co.	HT # L61715	N/A	2" DBA-9	1990	Replacement	NO	
		1	<u></u>					ļ	)
	<b>D</b>	lank Dani anna wat	V 1/ 00F -		- <b>4</b> -i-i				
•	Description of V	Work <u>Replaced val</u>	ve v-14-005 a	nd associate	ed piping.			<del></del>	
	Tests Conducted:	: Hvdrostatic	x Pneu	matic	□ Nominal (	Operatio	n Pressure		
-		Other	<u> </u>		<b>ن</b>	•	206 °F	<b>نــ</b> ـن	
			Pressure	1026	psi TestTen	♥•	200 'P		
		J			<del></del>				



	0-90-39 for further details)	***************************************		
-				
	(FI	RTIFICATE OF COMP	I TAMPE	
	that the statements made in the ASME Code, Section X1.	ne r <del>epo</del> rt are cor	rect and this <u>rep</u> re	pair or replacement
Type Code S	Symbol Stemp <u>None</u>			,
				t ·
Certificate	e of Authorization No. <u>None</u>	e		Expiration Date
	Shaujan			11 12
Signed	ner or Owner's Designee, Title	Codes & M	aterials, TGL Dat	:e
	er or Owner's Designee, little			
				<u></u>
	CERTIFIC	CATE OF INSERVICE	INSPECTION	
I, the undersig	ned, holding a valid commiss	ion issued by th	e National Board	of Boiler and Pressure
inspectors and t	the State or Province of	Iowa	and employed by have inspect	/ <u>Hartford Steam Boiler</u> ted the components descr
this Owner's Rep	Hartford, Connectic port during the period to the best of my knowledge and	5-18-70	to	11-1-1-6
, and state that maasures describ	to the <b>best of my</b> knowledge an ped in the Owner's Report in ac	d belief, the Own cordance with the	er has performed ex e requirements of t	aminations and taken corr he ASME Code. Section XI
				•
concerning the e	is certificate neither the Insexaminations and corrective mea s employer shall be tiable in	asures described any manner for ar	in this Owner's Rep	ort. Furthermore, neith
any kind arising	from or connected with this i	inspection.	•	•
<u></u>	Drs Signeture	Commissions	NB 8829(I)(N) 9	41-IA
Inspecto	ors Signeture		National Board, Sta	ate, Province, and Endors
	14 19 90			

#### FORM NPV-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES

#### As Required by the Provisions of the ASME Code Rules

==				
1.	Manufactured by 701 First St	ng Valve Company, Williamsport, P	4 17701 Oro	ter No. EA742
.,.) <b></b> .	(N	eme & Address of Manufacturer)		
$\sim$	Iowa Electri	c Light & Power Cor	mpany	
Ο,	Manufactured for P.O. Box 351	., Cedar Rapids, Io	wa 52406 Or	ier No. <u>542237</u>
<b>ນ</b> ້	, manual decision in the second	(Name and Address)		
	Iowa Flootpic light &	Power Company		
3.	Owner Iowa Electric Light &	rower company		<del> </del>
4.	Location of Plant Duane Arnold En	ergy Center, 3277	DAEC Rd., Palo, Id	wa 52324
ָב כ	PONE XX Valve Identification EA742	? <b>-3-</b> 2		
.). ()		•	_	
		/alve w/10" Teel Hai		
	(Brief dea	scription of service for which ed	imbweut was designed)	
	(a) Drawing No. W8822831 R/A	Prepared by Ancho	r/Darling Valve Co	mpany
	(b) National Board No. N/A	_		
		100		
6.	Design Conditions 3600 (Pressure)	psi	°F	
				1
7.	The material, design, construction, and	vorkmanship complies with A	SME Code Section III. Cla	.55
7.	The material, design, construction, and w			
7.	The material, design, construction, and we Edition 1971, Addenda			
7.				
7.				Remarks
7.	Edition 1971, Addenda	Date Summer 1971	Manufacturer	
7.	Edition 1971 , Addenda	Date Summer 1971	Case No.	
7.	Edition 1971 , Addenda  Mark No.  (a) Castings	Date Summer 1971  Meterial Spec. No.	Manufacturer	
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458	Date Summer 1971  Meterial Spec. No.	Manufacturer	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458  S/N 3	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458  S/N 3	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458  S/N 3	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458  S/N 3	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458  S/N 3	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458  S/N 3	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458  S/N 3	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458  S/N 3	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458  S/N 3	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks
7.	Mark No.  (a) Castings  Body HT.#1876  S/N 876  Bonnet HT.#Y2458  S/N 3	Meterial Spec. No.  SA351-CF8M	Manufacturer  Valcast	Remarks

#### FORM NPV-1 (back)

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-	Bolting			
-	N/A			
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(a) (	Other Parts		`	
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Hydrost	ratic test 5400 psi.	•		
	CE	ERTIFICATION OF I	DESIGN	
Design is	nformation on file at Anchor/Darli	ng Valve Co., W	illiamsport, PA 17	7701
	Anchon/Dan	ling Valve Co	Williamsport, PA	17701
Screen an	naivais report on file at ANCHOY/Day	7 7 11 1 TO 00 1 7		
Street an	naissis report on file at Anchor/Dar specifications certified by R. S. Po	well	(1) Prof. Eng. State	A Reg. No. 14420
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	P.O.Box 351, C								
Р		<u>edar Rapids, IA 52</u> Address	2406		Sheet 1 of	2			
P									
	lant <u>Duane Arn</u>	old Energy Center Name	····		Unit 1		<del></del>		
	3277 DAFC Pd	Palo, IA 52324			(	MAR #A	01133 (EMA)		
_	Address				R		rganization P.O.M	lo.,Job No.	•
u	lork Performed	by <u>lowa Electric</u>			Type Code Symbol S	Stamp	None		
		Name		•	Authorization No.		None		
	3277 DAEC Road	Palo, IA 52324			Expiration Date _		None		
		Address		2.					
I	dentification	of System1 1/4	" Relief valv	e line for h	IPCI Barometeric Co	ndenser	(Class 2)		
,	alanniicahla C	onst Code ANSI R	<b>31.7</b>	19 67	Edition,		Addenda.	N/A	Co
C	ase								_
(	(c)Construct	ion Code of Replac	ement item Sec	tion 111197:	or Replacements 19 <u>8</u> <u>'4</u> Edition, <u>S75</u> Adden	da with	Code Case(	pipe)	
	Sect. III 19	977 Edition, S78 Ac	idenda(flange);	Section III	. 1983 Edition \$85	Addenda	(studs, nuts)		
I	dentification	of Components Rep	aired or Replac	ced and Rep	lacement Components	3			
	<del></del>							ASME	_
				National	1 1		Repaired	Code	
	Name of omponent	Name of Manufacture	Manufacturer Serial No.	Board No.	Other Identification	Year Built	Replaced, or Replacement	Stamped (Yes	
-								or No)	
			<u> </u>				<u> </u>		
1/4" p	ipe (sch 80)	Bechtel	n/a	n/a	relief valve line	1972	Replaced	No	
1/4" p	ripe (sch 80)	Chicago- Tube & Iron	n/a	n/a	1 1/4" HBB-*	1979	Replacement	No	
150#	Flanges	Hub Inc.	Ht. Code ARPN-Coffer	n/a	1 1/4" H88-*	1990	Replacement	No	
- stud	ls	Cardinal	Ht. No. X569B	n/a	1 1/4" HB8-*	1986	Replacement	No	
		Cardinal	Ht. No. KC 8972	n/a	1 1/4" HBB-*	1986	Replacement	No	
- nuts									
lda W1	A, W1B	Iowa Electric	n/a	n/a	1 1/4" HBB-*	1990	Replacement	No	
_									
0	Description of	Work Replaced pi	pe with pipe a	nd flange co	onnections				
,	Tests Conducted	l. Nudenatatic	. Does	matic	☐ Nominal C	meratio	n Pressure		
'	lests conducted					•		لا	
		Other	Pressure	18,75	psi Test Tam	p	<u>74.5</u> °F		
					drawings may be use	4	ا حقم شاشان	ov :-	

ANII) 10-15-80

the number of sheets is recorded at the top of this form.

tested with V	T-2 personnel under ISI report #	90-323.		
* line designa	ation not identified in Betchel I	M-190.	·	
•		CERTIFICATE OF COMPLI	IANCE	
	tify that the statements made in	the report are corre		
to the rules	s of the ASME Code, Section XI.		repair	r or replacement
Type Co	ode Symbol Stamp <u>None</u>			
A -+141				
Certiti	icate of Authorization NoNo			Expiration Date
Cianad	Sunda Shar	مر مدر م		iu-5-
3 i gneu	Owner or Owner's Designee, Titl	le 1	<u>:erials, IGL</u> vate _	
	· CERTI	FICATE OF INSERVICE	INSDECTION	
• • • • • • • • • • • • • • • • • • • •				
	ersigned, holding a valid commission the State or Province of			
of _	Hartford, Connect	ticut	have inspected	the components describ
, and state	Report during the period that to the best of my knowledge	and belief, the Owner	has performed examin	<u>/デー/ミッテオ</u> nations and taken corre
measures des	scribed in the Owner's Report in	accordance with the	requirements of the	ASME Code, Section XI.
By signir	ng this certificate neither the I	Inspector nor his em	oloyer makes any warr	anty, expressed or imp
concerning t	the examinations and corrective m	measures described in	n this Owner's Report	. Furthermore, neither
any kind ari	or his employer shall be liable i ising from or connected with this	n any manner for any S inspection.	personal injury or p	property damage or a to
1.	4 // 1	•		
Inst	pectors Signature	Commissions_	NB 8829(1)(N) 941- ational Board, State,	, Province, and Endorse
	pectors Signature	•		
nata 9	2 1 10 9A			

1.	Owner Iowa Ele	ectric Light and Po	ier		Date Sept.	11,1990		
	P.O.Box 351,	Cedar Rapids, IA 52	2406		Sheet 1 of	2		
2.	Plant Duane A	rnold Energy Center			Unit1			
	<u></u>	Name						
	3277 DAEC Rd	. Palo, IA 52324	· · · · · · · · · · · · · · · · · · ·		PMAR 1043210	& CMAR	093812	
	Addre	ss			•	Repair (	Organization P.O.	lo.,Job No.
3.	Work Performed	d by <u>Iowa Electric</u> Name			Type Code Symbol	Stamp	None	
		ndire			Authorization No.		None	
	3277 DAEC Rd	. Palo, IA 52324		<del></del>	Expiration Date		None	
		Address						
4.	Identification	n of System <u>Main</u>	Steam (class	1)				
5. *	(a)Applicable	Const. Code SECT.	111	19 <u>_68</u>	Edition, <u>W68</u>		_Addenda,N_A	Code
6.	*GE Spec 21A92	Edition of Section 206 Rev 6 & 7 n of Components Rep					_	
							γ.	
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
MSRV P	ilot Val <b>ve</b>	Target Rock	S/N 199	N/A	PSV-4407	1975	Replaced	Yes
MSRV P	lot Valve	Target Rock	S/N 202	N/A	PSV-4407	.1975	Replacement	Yes
MSRV Ma	ain Body	Target Rock	Unknown	N/A	PSV-4407	1975	Replaced	Yes
MSRV Ma	ain Body	Target Rock	S/N 202	N/A	PSV-4407	1975	Replacement	Yes
					·			
7.	Description o	f Work <u>MSRV Pilot/</u>	Main Body was	replaced wi	th new MSRV Pilot/	Main Boo	ty S/N 202.	
8.	Tests Conduct	ed: Hydrostatic	Pneu	matic	Nominal	O <b>per</b> atin	g Pressure	×
		Other	Pressure	1026	psi Test Tar	mp	206 °F	

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ in. x 11 in.,(2)information in itema 1 through 6 on this repart is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.



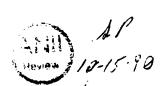
FORM NIS-2 (Back) sheet 2 of 2

to the rules of the ASME Code, Section XI. repair or replacement  Type Code Symbol Stamp Nona	purchased from Commonweal	th Edison (P.O.E9-18747-N-RG). A	VT-1 (Rpt#s 89-18 & 90-20	0) was performed and acc
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp Nona  Certificate of Authorization No. None Expiration Date No.  Signed 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 Inspectors and the State or Province of IOMA and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Owner's Report during the period 10.5-FF to Owner has performed exeminations and taken corrective measures described in the 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 in concerning the exeminations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a larly kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	A VT-3 (Rpt# 90-202) was	performed on the Pilot Valve. NCR	90-099 was written becaus	se the preservice VT-3 ex
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp Nona  Certificate of Authorization No. None  Signed Codes & Materials, TGL  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 Inspectors and the State or Province of IOMA and amployed by Martford Steam Boiler this Owner's Report during the period Available of the Components described in the Owner's Repart in accordance with the requirements of the ASME Code, Section XI  By signing this certificate neither the Inspector nor his employer makes arry warranty, expressed or in concerning the exeminations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer makes arry warranty, expressed or in concerning the exeminations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a larry kind arising from or composted with this inspection.  Commissions NB 8829(I)(N) 941-IA	the Main Body S/N 202 was	not performed. The NCR was dispos	sitioned "USE AS IS". A VI	'-2 exem (89-13) was acce
We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Codes & Materials, TGL Date  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of IOMA and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Dwner's Report during the period Codes & Materials of the ASME Code, Section XI By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or in concerning the exeminations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-1A	after installation.			
Type Code Symbol Stamp Nona  Certificate of Authorization No. None Expiration Date None  Signed Commissions issued by the National Board of Boiler and Pressure Inspectors and the State or Province of Hartford, Connecticut have inspected the components described in the Owner's Report during the period and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken cormeasures described in the Owner's Report during the period significance with the requirements of the ASME Code, Section XI By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or in concerning the exeminations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be tiable in any manner for any personal injury or property damage or a large Kind arising from or connected with this inspection.  Commissions NB 8829(1)(N) 941-1A		CERTIFICATE OF	F COMPLIANCE	
Certificate of Authorization No. None Expiration Date No. Signed Survive Should Codes & Materials, TGL Date 10 - 5 - 7.  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Danier's Report during the period 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10				
Signed Survey Share Codes & Materials, TGL Date 10-5-  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 Inspectors and the State or Province of 10MA and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in Source Report during the period 6-12-12 have inspected the components described and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken commeasures described in the 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 in concerning the exeminations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.  Commissions NB 8829(1)(N) 941-IA	Type Code Symbol St	tampNona		
CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of	Certificate of Auth	horization No. <u>None</u>		Expiration Date <u>Non</u>
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of IOMA and amployed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described this Owner's Report during the period Iometic to Iometic Iome	Signed Succe Owner or Ob	le Shaufai code	es & Materials, TGL Date	10-5-,1
Inspectors and the State or Province of IOMA and amployed by Hartford Steam Boiler have inspected the components described to to to to to to to to to to to to to		CERTIFICATE OF INSE	ERVICE INSPECTION	
this Owner's Report during the period	Inspectors and the State	or Province ofIOWA	and amployed by	Hartford Steam Boiler 1&
concerning the exeminations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	this Owner's Report duri	ing the period	to to	19-7-92 Ninations and taken corre
Commissions NB 8829(I)(N) 941-IA Inspectors Signature  Commissions NB 8829(I)(N) 941-IA National Board, State, Province, and Endors	concerning the exeminati Inspector nor his employ	ions and corrective measures descr ver shall be liable in any manner :	ibed in this Owner's Repo	rt. Furthermore neithe
Inspectors Signature National Board, State, Province, and Endors	Scott ,	Commis	sions <u>NB 8829(I)(N) 941-I</u>	<u> </u>
	Inspectors Signa	ature	National Board, Stat	e, Province, and Endorse



1.	Owner <u>lowa Ele</u>	ectric Light and Po Name	wer		Date <u>Sept.</u>	11,1990		
	P.O.Box 351,	Cedar Rapids, IA 5			Sheet 1 of	2	· · · · · · · · · · · · · · · · · · ·	····
2.	Plant <u>Duane Ar</u>	rnold Energy Center Name			Unit1			
	3277 DAEC DA	Palo, IA 52324			PMAR 1043208			
	Addre					Repair (	Organization P.O.	lo.,Job No.
3.	Work Performed	by <u>Iowa Electric</u>			Type Code Symbol	Stamp	None	
		Name			Authorization No.		None	
	3277 DAEC Rd	. Palo, IA 52324 Address			Expiration Date		None	
4.	Identification	n of System <u>Main</u>		1)				
5. *	Case	Const. Code <u>SECT.</u> Edition of Section O6 Rev 6 & 7						Cod
6.	•	n of Components Rep	mired or Repla	ced and Rep	lacement Component	s		
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Yesr Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
MSRV P	ilot Valve	Target Rock	S/N 176	N/A	PSV-4405	1975	Replaced	Yes
MSRV P	ilo <b>t Valve</b>	Target Rock	S/N 141	N/A	PSV-4405	1975	Replacement	Yes
7.	Description of	f Work <u>MSRV Pilot</u>	Valve S/N was	replaced by	repaired Pilot Va	Ive S/N	141.	<u></u>
	·							
8.	Tests Conducti	ed: Hydrostatic	Pneu	matic	Nominal	Operatin		×
		Other	Pressure	1026	psi Test Tam	mp	<u>206       °</u> F	

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8% in. x 11 in.,(2)information in itame 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.



installed in location PSV-4	405. A VT-2 examination	was performed (89-1.	3) and accepted	1
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				<del></del>
•				
				,
	CERTIFI	CATE OF COMPLIANCE		
We certify that the	statements made in the re	port are correct and	this replace	ement c
to the rules of the ASME (	Code, Section XI.		repair	or replacement
	•			
Type Code Symbol Star	mp None	· ·		-
Certificate of Author	rization NoNone			_ Expiration Date <u>No</u>
		,		_ cxpiracion bace _m
signad Suraa	du Stand	Codes & Materials	. 701	10-7-
Owner or Owne	er's Designee, Title	Codes & Materials	s. IGL Date _	102 ) 2
			<del></del>	
	CERTIFICATE	OF INSERVICE INSPECT	TIOM	
I, the undersigned, hold	ing a valid commission	issued by the Natio	nal Board of	Boiler and Pressure
Inspectors and the State of	or Province ofI	OWAand	employed by Ha	rtford Steem Boiler 1
of Hart this Owner's Report during	the period	r -/ <i>5-50</i>		the components descri
, and state that to the bes	st of my knowledge and bel	ief, the Owner has p	erformed exemin	ations and taken corr
measures described in the	Owner's Repart in accord	ance with the requir	ements of the	ASME Code, Section XI
By signing this certifi	icate neither the Inspect	or ner his employer	makes any weer	anty avanced on in
concerning the exemination	ns and corrective measure:	s described in this	Owner's Report	. Furthermore peith
Inspector nor his employer	shall be liable in any m	manner for any persor	net injury or p	roperty damage or a l
any kind arising from or o	connected with this inspec	ction.		
Scoll 1	seller	Commissions NB 8829	(I)(N) 941-IA	
Inspectors Signation	ure	National	Board, State,	Province, and Endors
2				

1.	Owner <u>lowa Elect</u>	tric Light and Po Name	wer		Date <u>Sept.</u>	11,1990			
	P.O.Box 351, Ce	edar Rapids, IA 5	2406		Sheet <u>1 of</u>	2			
		Address							
2.	Plant Duane Arno	old Energy Center Name		<del></del>	Unit1				
	3277 DAEC Rd.,	Palo, IA 52254			PMAR 1043205	•			
	Address						rganization P.O.M	io.,Job No	<b>.</b>
3.	Work Performed b	oy Iowa Electric			Type Code Symbol	Stamp	None		
		Name			Authorization No.		None		
								· ·	
	3277 DAEC Rd.	Palo, IA 52324 Address			Expiration Date		None		
4.	Identification o	of System Main	Steam (class	1)					
5. *	Case	•			Edition, <u>W68</u>				_Code
	(b)Applicable Ed *GE Spec 21A9206		XI Utilized f	or Repairs	or Replacements 19	80 W81	<del></del> .		
6.	Identification of	of Components Rep	aired or Repla	ced and Rep	lacement Component	:8			
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repeired Replaced, or Replacement	ASME Code Stamped (Yes or No)	
Hex Boli	t (8 ea)	Cardinal	HT#211916	N/A	PSV-4402	1989	Replacement	No	
Nut-Flex	(loc (12 ea)	Target Rock	Part # 00FC1812	N/A	PSV-4402	unknown	Replacement	No	
									J
-	B	10-1- <b>0</b> 1	. Nav. <b>O</b> aldo	L N	. //03 ± i				
7.	Description of N	WORK <u>Replaced 12</u>	Mex Bolts and	I NUTS ON PS	V-4402 during inst	attation	•		
8.	Tests Conducted:	: Hydrostatic	Pneu	matic	Nominal	Operatin	g Pressure	$\overline{\mathbf{x}}$	
		Other	Pressure	1026	psi Test Ta	тр	206 °F		
. ,		_			•				

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



CERTIFICATE OF COMPLIANCE  We certify that the statements made in the repart are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Codes & Materials, TGL Date  1, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Owner's Report during the period 10 10 10 10 10 10 10 10 10 10 10 10 10	
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the repart are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Codes & Materials, TGL Date  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressur Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler have inspected the components described in the Owner's Report during the period to IOMA pade speriormed exeminations and taken comeasures described in the Owner's Repart in accordance with the requirements of the ASME Code, Section is any signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the examinations and corrective measures described in this Owner's Report. Furthermore, nei Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	confo
We certify that the statements made in the repart are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Codes & Materials, TGL Date 10-1-  Owner or Owner's Designee, Table  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Dwner's Report during the period 1-1-98 to 18-15-32, and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken comeasures described in the Owner's Repart in accordance with the requirements of the ASME Code, Section?  By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the examinations and corrective measures described in this Owner's Report. Furthermore, nei Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	confo
We certify that the statements made in the repart are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Codes & Materials, TGL Date  Codes & Materials, TGL Date  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Dest of my knowledge and belief, the Owner has performed exeminations and taken comeasures described in the Owner's Report in accordance with the requirements of the ASME Code, Section Section; By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the examinations and corrective measures described in this Owner's Report. Furthermore, nei Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	confo
Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Codes & Materials, TGL Date  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Dwner's Report during the period Tolds and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken components described in the Owner's Report in accordance with the requirements of the ASME Code, Section in By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the examinations and corrective measures described in this Owner's Report. Furthermore, nei Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	confo
Certificate of Authorization No. None Expiration Date  Signed Codes & Materials, TGL Date  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler of Nartford, Connecticut have inspected the components described in the Dwner's Report during the period, and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken components described in the Owner's Report in accordance with the requirements of the ASME Code, Section is By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the exeminations and corrective measures described in this Owner's Report. Furthermore, nei Inspector nor his amployer shall be liable in any marner for any personal injury or property damage or a any kind arising from or connected with this inspection.	
Certificate of Authorization No. None  Signed Codes & Materials, TGL Date  Codes & Materials, TGL Date	
Certificate of Authorization No. None  Signed Survive Service Codes & Materials, TGL Date  Certificate Of INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler of Nartford, Connecticut have inspected the components described in the Dwner's Report during the period F-13-92 to A-15-72 and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken comeasures described in the Owner's Report in accordance with the requirements of the ASME Code, Section is signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the examinations and corrective measures described in this Owner's Report. Furthermore, nei Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	
Signed Sumular Scarper Codes & Materials, TGL Date 10-1-  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described that to the best of my knowledge and belief, the Owner has performed exeminations and taken compassures described in the Owner's Repart in accordance with the requirements of the ASME Code, Section is By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the exeminations and corrective massures described in this Owner's Report. Furthermore, nei Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described this Owner's Report during the period F-13-92 to 10-15-92, and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken comeasures described in the Owner's Report in accordance with the requirements of the ASME Code, Section is By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described to 10-15-32, and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken compassures described in the Owner's Report in accordance with the requirements of the ASME Code, Section is By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neithing the examinations and corrective measures described in this Owner's Report. Furthermore, neithing the examinations and corrective measures described in this Owner's Report. Furthermore, neithing the examinations and corrective measures described in this Owner's Report. Furthermore, neithing the examinations and corrective measures described in this Owner's Report. Furthermore, neithing the examinations and corrective measures described in this Owner's Report.	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described to 10-15-32, and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken compassures described in the Owner's Report in accordance with the requirements of the ASME Code, Section is By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neithing the examinations and corrective measures described in this Owner's Report. Furthermore, neithing the examinations and corrective measures described in this Owner's Report. Furthermore, neithing the examinations and corrective measures described in this Owner's Report. Furthermore, neithing the examinations and corrective measures described in this Owner's Report. Furthermore, neithing the examinations and corrective measures described in this Owner's Report.	, 19
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of	
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Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described this Owner's Report during the period In the Owner has performed exeminations and taken compassures described in the Owner's Report in accordance with the requirements of the ASME Code, Section is By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	- V
this Owner's Report during the period	181
, and state that to the best of my knowledge and belief, the Owner has performed exeminations and taken comeasures described in the Owner's Repart in accordance with the requirements of the ASME Code, Section of the By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither the Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	ribed
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Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	XI.
Inspector nor his amployer shall be liable in any manner for any personal injury or property damage or a any kind arising from or connected with this inspection.	impli
any kind arising from or connected with this inspection.	ther
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Inspectors Signature Commissions NB 8829(I)(N) 941-IA  National Board, State, Province, and Endo	rseme
Date <u>J. A. 15</u> 19 90	

1.	Owner <u>lowa Ele</u>	ctric Light and Po	MeL		Date <u>Septem</u>	ber 11,	1990		
	P.O.Box 351,	Cedar Rapids, IA 5			Sheet 1 of	2			
		Address	i						
2.	Plant <u>Duane Arr</u>	nold Energy Center Name	·		Unit 1				
	3277 DAEC Rd.	Palo, IA 52324 s	·			CMAR #0	95115 Organization P.O.	No. Joh N	<del>_</del>
3.	Work Performed	by Ioua Electric				•	_	10.,000 N	٠.
J.	work Periormed	by <u>lowa Electric</u> Name		<del></del>		-			
					Authorization No.	•	None		<del></del>
	3277 DAEC Roec	1 Palo, IA 52324 Address			Expiration Date	<del></del>	None		
4.	Identification	of System <u>HPCI</u>	Steam outboar	rd valve 10"	DLA-3 (class 1)				
5.	(a)Applicable (	Const. Code <u>ASME P</u>	UMP & VALVE CO	DDE 19 68	Edition,		Addenda,	N/A	Code
		dition of Section	XI Utilized 1	for Repairs o	or Replacements 19	80 W81	class 1		
6.	Identification	of Components Rep	aired or Repla	eced and Repl	acement Component	8			
	· .								_
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)	
	· · · · · · · · · · · · · · · · · · ·								
		ANCHOR						<u> </u>	
MQ-22	39	Valve Co.	IN-003	N/A	10"-DLA-GT	1972	REPAIRED	YES	
								<del></del>	
		·							
				<u> </u>	<u>.                                    </u>			L	
7.	Description of	Work <u>Machining</u> of	f disc tee slo	t					
_							•		
8.	Tests Conducted	: Hydrostatic	Pneu	matic	Nominal (	peratio	n Pressure	×	
		Other	Pressure	1026	psi Test Tam	p	<u>206 °</u> °F		
	in.,(2)informat	tal sheets in form ion in items 1 thm heets is recorded	rough 6 on thi	s report is	rawings may be us included on each	ed, prov sheet, a	rided (1) size is und (3) each sheet	8% in.x is numbe	11 red and
	· .	AP 10-15	92	·					
	٠	19-13	100				•		

		······································			
		CERTIFICATE	OF COMPLIANCE		
	the statements mad		are correct and th		
o the rules of the	ASME Code, Section	XI.		repair or	replacement
Type Code Symbo	l Stamp <u>None</u>				
Certificate of	Authorization No	None		E	xpiration Date
· C	42				ic = 5 =
Signed Signed Owner of	melic St. r Owner's Designee,	, Title	odes & Materials,	<u>TGL</u> Date	,
	C	CERTIFICATE OF I	NSERVICE INSPECTIO	W	
, the undersigned,	holding a valid o	commission issue	d by the Nations	l Board of Boi	ler and Pressure
nspectors and the S	Hartford, Co	nnecticut	hav	e inspected the	commonents descri
nis Owner's Report of and state that to t	during the period _	edge and helief	24-97	to /ii	جياحسي نر سا
easures described in	n the Owner's Repor	t in accordance	with the requirem	ents of the ASM	E Code, Saction XI
By signing this c	ertificate neither	the Inspector na	or his employer ma	kes any warrant	y, expressed or in
oncerning the examinations of the compact of the co	nations and correct	tive measures des	scribed in this Ow	ner's Report.	Furthermore neith
ny kind arising from	or connected with	this inspection	1.	injury or prop	ercy damege or a t
Sion	Pruly		nissions <u>NB 8829</u>	(1)(N) 941-1A	
Inspectors S	ignature		National B	loard, State, Pr	ovince, and Endors

	Owner <u>lowa Elect</u>	ric Light and Pow Name	ier		Date <u>Septem</u>	<u>per 12,1</u>	990	
	P.O.Box 351, Ce	dar Rapids, IA 52	2406		Sheet <u>1 of</u>	2	· · · · · · · · · · · · · · · · · · ·	
		Address						
	Plant Duane Arno	ld Energy Center Name		<del></del>	Unit1	<del></del> -		
	3277 DAEC Rd.	Palo, IA 52324			CMAR #0986	24 (EMA)	), P.O. S55713,S5	3552
	Address						organization P.O.N	
	Work Performed b	y Iowa Electric			Type Code Symbol	Stamp_	None	
•		Name			Authorization No.		None	
	3277 DAEC Road	Palo, IA 52324 Address		<del></del>	Expiration Date		None	<u> </u>
	Identification o	of System <u>Recir</u>	c 'B" Dischar	ge valve By-	pass (class 1)			
		nst. Code <u>ASME P</u> L	JMP & VALVE CO	DE 19 68	Edition,	·	Addenda,	N/A Cod
	(b)Applicable Ed (c)Replacemen	lition of Section t code of constru	XI Utilized f ction <u>Section</u>	or Repairs o <u>III</u> 19 <u>83</u> Edi	or Replacements 19 tion <u>N/A</u> Addenda, (	80 W81 Class 1	class 1	
	Identification o	of Components Repa	aired or Reple	cad and Repl	acement Component	s		
	Nama of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Roplaced, or Replacement	ASME Code Stamped (Yes or No)
isc		ANCHOR Darling	s/n 7	N/A	MO-4630	1983	Replacement	YES
	rilbo	Anchor	W-2936	N/A	MO-4630	1990	Replacement	NO
) - ST		Darting Anchor						
) - NL	ITS .	Darling	W-1466	N/A	MO-4630	1990	Replacement	NO
		<u>i                                     </u>	<u> </u>		<u> </u>	l	1	
	Description of W	ork <u>Replaced dis</u>	sc, studs and	nuts. Some 8	areas machined for	ргорег	fit.	
	Tests Conducted:	: Hydrostatic	Pneu	matic	Nominal	O <b>pe</b> ratio	n Pressure	×
		Other	Pressure	1026	psi Test Tar	тр	°F	
					drawings may be us included on each		vided (1) size is	

9-21-92

erformed under IS	I # 90-238. Valve was VT-2 in		PT inspected. Vt-1 of bolting and r
	•		
	Œ	ERTIFICATE OF COMPLIANCE	
We certify to the rules of	that the statements made in the ASME Code, Section XI.	he repart are correct and	this replacement co
Type Code S	/mbol Stamp <u>None</u>		
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Certificate	of Authorization NoNon	<u>le</u>	Expiration Date
Signed 🚤	When I Shake	Codes & Materials.	TGL Date,
Own	er or Owner's Designee, Title		,
	CERTIFI	CATE OF THOUMAN THOUGHT	
		CATE OF INSERVICE INSPECTI	
Inspectors and t	e State or Province of	Iowa and e	al Bosrd of Boiler and Pressure employed by <u>Hartford Steam Boiler</u>
of	Hartford, Connection	cut ha	to 9-2/-90
this Owner's Rep	to the best of my knowledge an	nd belief, the Owner has per	rformed examinations and taken corr ments of the ASME Code, Section XI
, and state that			
, and state that measures describ By signing th concerning the e Inspector nor hi	is certificate neither the Incomminations and corrective measurements employer shall be liable in from or connected with this	easures described in this O any manner for any persona	nekes any warranty, expressad or in Dwner's Report. Furthermore, neith al injury or property damage or a l
By signing the concerning the e Inspector nor hi any kind arising	caminations and corrective meas employer shall be liable in from or connected with this	easures described in this O any manner for any persone inspection.  Commissions NB 882	Numer's Report. Furthermore, neith at injury or property damage or a to 9(I)(N) 941-IA
By signing the concerning the e Inspector nor hi any kind arising	caminations and corrective meas employer shall be liable in from or connected with this	easures described in this O any manner for any persone inspection.  Commissions NB 882	Numer's Report. Furthermore, neith al injury or property damage or a l

•	Owner <u>lowa Elect</u>	ric Light and Por	Wer		Date <u>Septemb</u>	per 12,1	990	
		Name						
	P.O.Box 351, Ce	edar Rapids, IA 5 Address			Sheet 1 of	2		
	01	. I d. Francis . Rombon			Unit1_			
•	Plant Duane Arno	old Energy Center Name			Unit	*		
	3277 DAFC Rd.	Palo, IA 52324			CMAR #0986	21 (EMA:	, P.O. S55713,S5	3552
	Address						rganization P.O.	
	Work Performed b	w Iowa Electric			Type Code Symbol	Stamo	None	•
		Name						
					Authorization No.		None	
	7277 DAEC Bood	Polo 14 52324			Expiration Date _		None	
	JZIT DAEC ROAG	Palo, IA 52324 Address			Expiracion bace		NOTIC	
	Identification o	of System Reci	rc 'A" Dischar	ge valve By-	pass (class 1)			
	1 deliciticación c			30 10110 07	,5-55 ,5-55 ,-2			
	(a)Applicable Co	onst. Code ASME P	JMP & VALVE CO	DE 19 68	Edition,		Addenda,	N/A C
	Case							
	(b)Applicable Ed (c)Replacemen	lition of Section It code of constru	XI Utilized for action Section	or Repairs o III1983 Edi	r Replacements 19 tion <u>N/A</u> Addenda, (	Class 1	class	
								•
	Identification o	or Components Rep	атгестог керца	ced and kept	acement Component	S		
		N	Manufacturer	National Board	Other	Year	Repaired	ASME Code
	Name of Component	Name of Manufacture	Serial No.	No.	Identification	Built	Replaced, or Roplacement	Stamped (Yes or No)
sc				No.				(Yes
		Manufacture	Serial No.		Identification	Built	or Roplacement	(Yes or No)
sc	Component	Darling Valve ANCHOR Darling Anchor	Serial No. unknown s/n 6	N/A N/A	Identification MO-4629 MO-4629	1968 1983	or Roplacement Replacad Replacement	(Yes or No) YES
isc		Manufacture Darling Valve ANCHOR Darling	Serial No.	N/A	Identification	1968 1983 1990	or Roplacement	(Yes or No) YES
isc ) - 9	Component	Darling Valve ANCHOR Darling Anchor Darling Anchor Darling Anchor	Serial No. unknown s/n 6	N/A N/A	Identification MO-4629 MO-4629	1968 1983	or Roplacement Replacad Replacement	(Yes or No) YES
isc ) - 9	Component	Darling Valve ANCHOR Darling Anchor Darling Anchor Darling Anchor Darling Darling Valve Manufacturing	unknown s/n 6 W-2936	N/A N/A N/A	Identification MO-4629 MO-4629 MO-4629	1968 1983 1990	or Roplacement Replacement Replacement	(Yes or No)  YES  YES
isc 0 - 9 0 - N	Component STUDS NUTS	Darling Valve ANCHOR Darling Anchor Darling Anchor Darling Anchor Darling Darling Darling Valve Manufacturing Darling Valve	unknown s/n 6 W-2936 W-1466 unknown	N/A N/A N/A N/A	Identification M0-4629 M0-4629 M0-4629 M0-4629	1968 1983 1990 1990	or Roplacement Replacement Replacement Replacement Replacement	YES YES NO NO
isc 0 - 9 0 - N	Component STUDS NUTS	Darling Valve ANCHOR Darling Anchor Darling Anchor Darling Anchor Darling Darling Valve Manufacturing	unknown s/n 6 W-2936 W-1466	N/A N/A N/A	Identification MO-4629 MO-4629 MO-4629 MO-4629	1968 1983 1990 1990	or Roplacement Replacement Replacement Replacement	(Yes or No)  YES  YES  NO
0 - N	STUDS NUTS STUDS	Darling Valve ANCHOR Darling Anchor Darling Anchor Darling Anchor Darling Darling Valve Manufacturing Darling Valve Manufacturing	unknown s/n 6 W-2936 W-1466 unknown unknown	N/A N/A N/A N/A N/A	Identification MO-4629 MO-4629 MO-4629 MO-4629 MO-4629 MO-4629	1968 1983 1990 1990 1968	or Roplacement Replacement Replacement Replacement Replacement Replaced	YES YES NO NO
isc 0 - 9 0 - N	STUDS NUTS STUDS	Darling Valve ANCHOR Darling Anchor Darling Anchor Darling Anchor Darling Darling Valve Manufacturing Darling Valve Manufacturing	unknown s/n 6 W-2936 W-1466 unknown unknown	N/A N/A N/A N/A N/A	Identification M0-4629 M0-4629 M0-4629 M0-4629	1968 1983 1990 1990 1968	or Roplacement Replacement Replacement Replacement Replacement Replaced	YES YES NO NO
isc ) - S ) - N	STUDS NUTS STUDS NUTS Description of W	Darling Valve ANCHOR Darling Anchor Darling Anchor Darling Anchor Darling Darling Valve Manufacturing Darling Valve Manufacturing Mork Replecad di	unknown s/n 6 W-2936 W-1466 unknown unknown	N/A N/A N/A N/A N/A N/A N/A	Identification MO-4629 MO-4629 MO-4629 MO-4629 MO-4629 MO-4629	1968 1983 1990 1990 1968 1968	or Roplacement Replacement Replacement Replacement Replacement Replaced	YES YES NO NO NO
isc 0 - 9 0 - N	STUDS NUTS STUDS	Darling Valve ANCHOR Darling Anchor Darling Anchor Darling Anchor Darling Darling Valve Manufacturing Darling Valve Manufacturing Mork Replecad di	unknown s/n 6 W-2936 W-1466 unknown unknown	N/A N/A N/A N/A N/A	Identification MO-4629 MO-4629 MO-4629 MO-4629 MO-4629 MO-4629	1968 1983 1990 1990 1968 1968	or Roplacement Replacement Replacement Replacement Replacement Replaced	YES YES NO NO

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



	hals were also machined for proper fit, Valve was VT-3 (90-230) and PT inspected VT-1 of bolting
ere perform	med under ISI # 90-229, Valve was VT-2 inspected under ISI # 89-13.
	CERTIFICATE OF COMPLIANCE
We ce to the rul	ertify that the statements made in the repart are correct and this replacement content the ASME Code, Section XI.
Туре	Code Symbol Stamp None
Certi	ficate of Authorization No. None Expiration Date
Signe	Owner or Owner's Designee, Title Codes & Materials, TGL Date 9-29- , 19
	CERTIFICATE OF INSERVICE INSPECTION
inspectors	dersigned, holding a valid commission issued by the National Board of Boiler and Pressure Ve and the State or Province of
, and state	Hartford, Connecticut have inspected the components described is Report during the period G-22-90 to To To To To To To To To To To To To To
Inspector	ing this certificate neither the Inspector nor his employer makes any warranty, expressed or imple the examinations and corrective measures described in this Owner's Report. Furthermore, neither nor his employer shall be liable in any manner for any personal injury or property damage or a los rising from or connected with this inspection.
	Commissions NB 88(9)( )N 941-IA  National Board, State, Province, and Endorsem
10	National Board, State, Province, and Endorsem

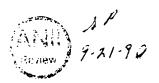
# FORM N-2 NPT CERTIF .E HOLDERS' DATA REPORT FOR NUCL 'ART AND APPURTENANCES' As required by the Provision of the ASME Code Rules, Section III, Div. 1

-				
L (a) Manufac	Anchor/Darling	Valve Co., 701 Fi	rst St., Williamson	ort, PA 1770
(b) Manufac	Towa Electr	ic Light & Power Co	o., P.O. Box 351, Ce	edar Rapids, Iowa 5
2. identificatio	xa-Certificate Holder's Serial No.		Next 1 Rd No.	
	nected According to Drawing No	•		
(b) Descrip	prion of Part Inspected	Jisc W/Stellite, (2	Pcs.) Heat No. H3	520 SA182-F304L
(c) Applies	able ASME Coder Section III, Edi	ition 1983 , Addenda	ine, Case No	N/A Class 1
3. Remacket_	4"-S150W-DD			
	A/DV S.O. P-G586-	-5		<u> </u>
	No Disc Hydro Per	formėd		
<del></del>				
To comify of	hat the statements made in this			en en defined in the Code or
oceas to the ru	les of construction of the ASM	E Code Section III.	• • • •	
ate Holder for	Design Specification and Stress appurtenances is responsible for	e furnishing a separate Desu		
nciuded in the	component Design Specification	m and Stress Report.)		
/	29 19 90 Signed	A 1 /0 1: 1/ 1	1/1/	
Dece	19 90 Signed	Anchor/Darling Val	ve to. By	race
/	•	(RPP Cartificate Heider)		د احداد
Certificate of A	Auchorizacios Expires	4/13/92.	Certificate of Authorization	No
			· · · · · · · · · · · · · · · · · · ·	
	CERTIFICATION O	of design for appur	RTENANCE (when applic	able)
Design info	mation on file at			
Screse maiy	rsis report on file at			
Design spec	rifications certified by		Prof. Eng. State_	Res. No.
36433 FFFTA	rsis report certified by		Prot. Eng. State_	Ŗeg. No
	CI	ERTIFICATE OF SHOP	INSPECTION	
i, the un	dersigned, holding a valid com	mission issued by the Nati	ional Board of Boiler and P	ressure Vessel Inspectors
and/or the S	Pennsy	Ivania and employe	d by Commercial Union	1 Insurance Company
	ton. Mass.	have inspect	ed the part of a pressure	the state of the s
Partial Deta and belief, th	e NPT Certificate Holder has con	structed this part is accords	nce with the ASME Code Sect	to the best of my knowledge ion III.
By signi	ag this certificate, neither the	Inspecter per his employe	f makes hav vartholy, expiri	essed or implied, concerno
shall he lie	art described in this Parti- ible is any measur for any po-	al Data Report. Further escael lajury of property di	rmere. neither the thispe wasge or a loss of any kind	ector nor his employer
	6-29	90		
Date	19			•
Charles	valled 17	Commissions		2392 and No.

(10/<del>77</del>)

						L 4/	1000	
	Owner <u>Iowa Elect</u>	ric Light and Pow Name	<u>er</u>		Date <u>Septem</u>	ber 14,	1990	
	P.O.Box 351. Ce	dar Rapids, IA 52	2406		Sheet 1 of	2		
		Address	<del>y</del>			_		
	Plant Duane Arno	ld Energy Center		<del></del>	Unit 1			
		Name	•					
	3277 DAEC Rd.	Palo, IA 52324			CHAR A	032 <b>59</b> , P	.o. \$57418	<del>-</del>
	Address					Repair (	Organization P.O.	.oN doL,.oN
	Work Performed b	y <u>Iowa Electric</u> Name		<del> </del>	Type Code Symbol	Stamp	None	
		naire			Authorization No.	·	None	
	3277 DAEC Rd.	Palo, IA 52324			Expiration Date		None	
		Address			· ·			
	Identification o	f System <u>Contr</u>	ol Rod Drives	(Class 1)				
	(a)Applicable Co Case	nst. Code <u>ASME Se</u>	ction III	19 <u>_77</u>	Edition, <u>\$77</u>		_Addenda, <u>N/A</u>	
	(b)Applicable Ed	ition of Section	XI Utilized f	or Repairs o	r Replacements 19	80 W81	<del></del>	
	(C) Uriginal (	construction code	ASHE III 196	s Eggion woo	Addenda per GE Co	onstruct	ion quality Requi	rements 22/
			ired or Repla	ced and Repl	ecement Component	<b>s</b> .		
_			ired or Repla	ced and Repi	ecement Component	\$		
	Identification of	f Components Repa		National			Repaired	ASME Code
		f Components Repa	ired or Repla  Manufacturer Serial No.		Other	year Built	Replaced,	Code Stamped
	Identification of	f Components Repa	Manufacturer	National Board	Other	Year		Code
	Identification of	f Components Repa	Manufacturer	National Board	Other	Year	Replaced,	Code Stamped (Yes
) Ho	Identification of	Name of	Manufacturer Serial No.	National Board No.	Other	Year	Replaced,	Code Stamped (Yes
D Ho	Name of Component	Name of	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
D Ho	Name of Component	Name of	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
D Ho	Name of Component	Name of	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
DD Ho	Name of Component	Name of	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
D Ho	Name of Component	Name of	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
RD Ho	Name of Component	Name of	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
RD Ho	Name of Component	Name of Manufacture	Manufacturer Serial No. Ht. Code KO	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
RD Hd	Name of Component	Name of Manufacture	Manufacturer Serial No. Ht. Code KO	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
RD Ho	Name of Component  Using Bolts (8ea)  Description of Wo	Name of Manufacture  General Electric	Manufacturer Serial No. Ht. Code KO	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
RD Hd	Name of Component  Using Bolts (8ea)  Description of Wo	Name of Manufacture  Seneral Electric  Ork Replecement	Manufacturer Serial No. Ht. Code KO	National Board No.	Other Identification	Year Built 1990	Replaced, or Replacement	Code Stamped (Yes or No)

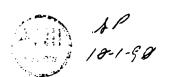
NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8% in. x 11 in.,(2)information in items 1 through 6 on this report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.



Apprilate Haller active	er's Data Reports to be	attached	
was performed under ISI # 90-363.			
		·	
Œ	RTIFICATE OF COMPLIANCE		
He consider that the character made in the		ed this contractor	confor
We certify that the statements made in the to the rules of the ASME Code, Section XI.	ie report are correct an	repair or replacement	control
Type Code Symbol Stamp Nona			
Type code symbol scalip			
Granifican of Archivelenting No. 11am	_	Suminanian Dat	na Hama
Certificate of Authorization No. New	<u> </u>	Expiration Dat	le <u>none</u>
$\overline{}$	2,02	ls. TGL Date 9-18-	
Signed Owner or Owner's Designee, Title	Codes & Material	ls. TGL Date 17-10	—·
owner of owner's pesignee, fitte	0		
CERTIFIC	CATE OF INSERVICE INSPEC	CTION	
I, the undersigned, holding a valid commiss	ion issued by the Nati	ional Board of Boiler and Pres	sure Vess
Inspectors and the State or Province of	IONA and	d employed by <u>Hartford Steam Boi</u>	iler I&I C
of <u>Hartford</u> , <u>Connecticut</u> this Owner's Report during the period		have inspected the components of to 1921	described
, and state that to the best of my knowledge an			n correcti
measures described in the Owner's Report in a			
By signing this certificate neither the In:	opertor nor his employed	n makee amy useranty evangeed	oc implie
concerning the examinations and corrective me			
Inspector nor his employer shall be liable in	any manner for any pers		
any kind arising from or connected with this	inspection.		
Sott Courting	Commissions NB 882	00/13/N3 0/1-1A	
Inspectors Signature	Nation	al Board, State, Province, and E	ndorsemen
Thopasto, o' trightata, o			
11201 02			
Date 16/10 2/ 19 98			
Date <u>ACFN 21 19 / 10</u>			

Owner_Lowe Electric Light and Power Name P.O.Box 351, Cedar Rapids, 1A 52406 Address Plant Duane Arnold Eneg Center Name 3277 DAEC Rd. Palo, 1A 52324 Address Work Performed by lows Electric Name Authorization No. Name Authorization No. Name Authorization No. Name Authorization No.  (a)Applicable Const. Code SECT. III 19 68 Edition, M68 Adderda, M/A Co Case (b)Applicable Edition of Section XI Utilized for Replaced and Replacements 1980 W81 *GE Spec 21A9206 Rev 6 & 7 Identification of Components Repaired or Replaced and Replacement Components  Name of Component Repaired or Replaced and Replacement Components  Name of Component Repaired No. Name Of Component Repaired or Replaced No. Plexioc (12 ea) Part # Part	_								
Plant Duane Arnold Energ Center Name  3277 DAEC Rd. Palo, IA 52324  Address  Repair Orgenization P.O.No., Job No.  Work Performed by Jova Electric Name  Authorization No.  Authorization No.  1277 DAEC Rd. Palo, IA 52324  Address  Identification of System Main Steam class X  (a)Applicable Const. Code SECT. III  (a)Applicable Edition of Section XI Utilized for Repoirs or Replacements 1980 u81  "GE Spec 2149206 Rev 6 & 7  Identification of Components Repaired or Replaced and Replacement Components  Name of Component Name of Serial No.  Name of Component Name of Components Repaired No.  National Board Other Year Repaired Replaced ('res or Replacement No.  No. Identification Replacement No.  Part # Serial No.  Description of Work Replaced & Nex Bolts and 12 Muts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nomeinsl Operating Pressure		Owner Iowa Elec	ctric Light and P	ower		Date <u>Sept.</u>	12 1990		
Address  Plant_Duame Arnold Eneg Center Name  3277_DAEC_Rd, Palo, IA 52324  Address  Work Performed by lowa Electric Name  Address  Repair Organization P.O.No., Job No.  Work Performed by lowa Electric Name  Address  Identification of System Main Steam class K  (a)Applicable Const. Code SECT. III  (a)Applicable Edition of Section XI Utilized for Repoirs or Replacements 1980 u81  "dC Spec 21A9206 Rev 6 & 7 Identification of Components Repaired or Replaced and Replacement Components  Name of Component Name of Manufacturer Serial No.  Name of Component Name of Manufacturer Serial No.  Name of Component Name of Namufacturer Serial No.  National Description of Nork Replaced No.  Description of Work Replaced 8 Nex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure			Name						
Address  Plant_Duame Arnold Eneg Center Name  3277_DAEC_Rd, Palo, IA 52324  Address  Work Performed by lowa Electric Name  Address  Repair Organization P.O.No., Job No.  Work Performed by lowa Electric Name  Address  Identification of System Main Steam class K  (a)Applicable Const. Code SECT. III  (a)Applicable Edition of Section XI Utilized for Repoirs or Replacements 1980 u81  "dC Spec 21A9206 Rev 6 & 7 Identification of Components Repaired or Replaced and Replacement Components  Name of Component Name of Manufacturer Serial No.  Name of Component Name of Manufacturer Serial No.  Name of Component Name of Namufacturer Serial No.  National Description of Nork Replaced No.  Description of Work Replaced 8 Nex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure		D O Day 751 (	Cadas Basida 18	E3/04		Chase 1 of	,		
Plant Duane Arrold Eneg Center Name  3277 DAEC Rd. Palo, IA 52324  Address  Repair Orgenization P.O.No., Job No.  Work Performed by lows Electric Name  Authorization No.  None  3277 DAEC Rd. Palo, IA 52326  Address  Identification of System Hain Steam class K  (a) Applicable Const. Code SECT. III  (a) Applicable Edition of Section XI Utilized for Repoirs or Replacements 1980 w81  (a) Applicable Edition of Components Repaired or Replaced and Replacement Components  Name of Name of Manufacturer Serial No.  No.  No.  No.  Repaired Replaced, N/A  Code Stamped Co		P.U.BUX 331, U				sneet			
Address    Sepair Organization P.O.No., Job No.   None   N			Addi Co	•					
Address  Work Performed by Lowa Electric Name  Authorization No. None  Authorization No. None  Authorization No. None  3277 DAEC Rd. Palo, IA 52324  Address  Identification of System Main Steam class %  (a)Applicable Const. Code SECT. III 19 68 Edition, W68 Addenda, N/A code Spec 219206 Rev 6 % 7 Identification of Components Repaired or Replaced and Replacement Components  Name of Component Name of Manufacture Serial No. Identification Part # Repaired Replaced, or Replacement Components  Name of Component Name of Name of Name of Name of No. Identification Part # Repaired Replaced or Replacement No. Identification Part # Repaired No. Identification Part # Repaired Replacement (Yes or No.)  Bolt (8 ea) Cardinal NT#211916 N/A PSV-4406 Information Replacement No. Identification Part # No.  Description of Work Replaced 8 Nex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure X		Plant Duane Arr	nold Eneg Cente	r		Unit1			
Address  Work Performed by Lows Electric Name  Authorization No.  Authorization No.  None  Authorization No.  None  Authorization No.  None  Authorization No.  None  Authorization No.  None  Authorization No.  None  Authorization No.  None  Address  Identification of System  Main Steam class K  (a) Applicable Const. Code SECT. III  19 68  Edition, M68  Addenda, N/A  Co Case  (b) Applicable Edition of Section XI Utilized for Repoirs or Replacements 1980 W81  "GE Spec 21A9206 Rev 6 & 7  Identification of Components Repaired or Replaced and Replacement Components  Name of Component  Name of Component  Name of Manufacturer  Serial No.  Mational Board No.  Identification  Wational Board No.  Identification  Suilt  Other Identification  Replaced Or Replacement No  Solt (8 ea)  Lardinal  NT#211916  N/A  PSV-4406  Unknown Replacement  No  Description of Work  Replaced 8 Hex Bolts and 12 Muts on PSV-4406 during installation.  Teats Conducted: Hydrostatic  Pressure			Name		-				
Address  Work Performed by Lows Electric Name  Authorization No.  Authorization No.  None  Authorization No.  None  Authorization No.  None  Authorization No.  None  Authorization No.  None  Authorization No.  None  Authorization No.  None  Address  Identification of System  Main Steam class K  (a) Applicable Const. Code SECT. III  19 68  Edition, M68  Addenda, N/A  Co Case  (b) Applicable Edition of Section XI Utilized for Repoirs or Replacements 1980 W81  "GE Spec 21A9206 Rev 6 & 7  Identification of Components Repaired or Replaced and Replacement Components  Name of Component  Name of Component  Name of Manufacturer  Serial No.  Mational Board No.  Identification  Wational Board No.  Identification  Suilt  Other Identification  Replaced Or Replacement No  Solt (8 ea)  Lardinal  NT#211916  N/A  PSV-4406  Unknown Replacement  No  Description of Work  Replaced 8 Hex Bolts and 12 Muts on PSV-4406 during installation.  Teats Conducted: Hydrostatic  Pressure		7777 0450 04	0-1- 14 5373/			2442 40/7000			
Name   Name   Name   None		32// DAEC Rd.	Pato, IA 52324			PMAR 1043209		<del></del>	<del> </del>
Name   Name   Name   None		Addres	S				Repair C	rgenization P.O.	No. Job No.
Authorization No									
Authorization No. None    3277 DAEC Rd, Palo, IA 52324		Work Performed				Type Code Symbol	Stamp	None	
Section of System			Name	•		A . Al			•
Identification of System Main Steam class 1( )  (a)Applicable Const. Code SECT. III						Authorization No	•	None	
Identification of System Main Steam class 1( )  (a)Applicable Const. Code SECT. III								•	
Identification of System Main Steam class 1( )  (a)Applicable Const. Code SECT. III		3277 DAEC Rd.	Palo, IA 5232	4		Expiration Date		None	
(a)Applicable Const. Code SECT. III 19.68 Edition, W68 Addenda, N/A Co Case (b)Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 W81 *GE Spec 21A9206 Rev 6 & 7 Identification of Components Repaired or Replaced and Replacement Components  Name of Name of Manufacturer Serial No. Identification Built or Replaced, or Replaced, or Replaced, or Replacement (Yes or No)  Bolt (8 ea)			Addres	s		,			
(a)Applicable Const. Code SECT. III 19.68 Edition, W68 Addenda, N/A Co Case (b)Applicable Edition of Section XI Utilized for Repairs or Replacements 1980 W81 *GE Spec 21A9206 Rev 6 & 7 Identification of Components Repaired or Replaced and Replacement Components  Name of Name of Manufacturer Serial No. Identification Built or Replaced, or Replaced, or Replaced, or Replacement (Yes or No)  Bolt (8 ea)									•
Case (b)Applicable Edition of Section XI Utilized for Repoirs or Replacements 1980 u81  *GE Spec 21A9206 Rev 6 & 7 Identification of Components Repaired or Replaced and Replacement Components  Name of Component Name of Manufacturer Serial Ha.  National Board Identification Suit Replaced, or Replacement Code Stamped (Yes or No)  Solt (8 ea)		Identification	or SystemMai	n Steam class	К )		<del></del>		
Case (b)Applicable Edition of Section XI Utilized for Repoirs or Replacements 1980 u81  *GE Spec 21A9206 Rev 6 & 7 Identification of Components Repaired or Replaced and Replacement Components  Name of Component Name of Manufacturer Serial Ha.  National Board Identification Suit Replaced, or Replacement Code Stamped (Yes or No)  Solt (8 ea)									
Case (b)Applicable Edition of Section XI Utilized for Repoirs or Replacements 1980 u81  *GE Spec 21A9206 Rev 6 & 7 Identification of Components Repaired or Replaced and Replacement Components  Name of Component Name of Manufacturer Serial Ha.  National Board Identification Suit Replaced, or Replacement Code Stamped (Yes or No)  Solt (8 ea)	*	(a)Applicable (	Const. Code SECT.	111	19 68	Edition, W68	•	Addenda. N/A	Co
Name of Component   Name of Manufacturer   Serial Ho.   National Board   No.   Identification   No.   Identification   No.   Replaced, or Replaced, or Replacement   No.   Replacement   Other Replaced, or Replacement   Other Replaced, or Replacement   Other Replace		Case							
Name of Component Name of Manufacturer Serial Ho.  Name of Component Name of Manufacturer Serial Ho.  No.   Other Identification   Year Repaired Replaced, or Replacement   No.   Replacem		(b)Applicable 8	dition of Sectio	n XI Utilized f	or Repoirs	or R <mark>eplacements 19</mark>	80 W81	_	
Name of Component Name of Manufacturer Serial No.   Name of Component Name of Manufacturer Serial No.   Identification   No.   Replaced, or Replacement   Code Stamped (Yes or No)    Bolt (8 ea)   Cardinal   HT#211916   N/A   PSV-4406   1989   Replacement   No    Flexloc (12 ea)   Farget Rock   ODFC1812   N/A   PSV-4406   unknown   Replacement   No    Description of Work   Replaced 8 Hex Bolts and 12 Nuts on PSV-4406   during installation.  Tests Conducted: Hydrostatic   Pneumatic   Nominal Operating Pressure   X								•	
Name of Component  Name of Manufacturer Serial Ha.  Name of Manufacturer Serial Ha.  No.  Name of Manufacturer Serial Ha.  No.  No.  No.  No.  No.  No.  No.  N		identification	at Components Re	paired or Repla	iced and Rep	lacement Component	:s		
Name of Component  Name of Manufacturer Serial Ha.  Name of Manufacturer Serial Ha.  No.  Name of Manufacturer Serial Ha.  No.  No.  No.  No.  No.  No.  No.  N			<u> </u>	<u> </u>		· · · · · · · · · · · · · · · · · · ·		<u> </u>	<del></del>
Name of Component  Name of Manufacturer Serial Ha.  Name of Manufacturer Serial Ha.  No.  Name of Manufacturer Serial Ha.  No.  No.  No.  No.  No.  No.  No.  N									ASME
Component Manufacture Serial Ho. No. Identification Built or Replacement (Yes or No)  Bolt (8 ea) Cardinal HT#211916 N/A PSV-4406 1989 Replacement No  Flexioc (12 ea) Farget Rock OUFC1812 N/A PSV-4406 unknown Replacement No  Description of Work Replaced 8 Hex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure X				l					Code .
Bolt (8 ea) Cardinal HT#211916 N/A PSV-4406 1989 Replacement No FlexLoc (12 ea) Target Rock ODFC1812 N/A PSV-4406 unknown Replacement No  Description of Work Replaced 8 Hex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure							1		1 '
Bolt (8 ea) Cardinal HT#211916 N/A PSV-4406 1989 Replacement No FlexIoc (12 ea) Target Rock ODFC1812 N/A PSV-4406 unknown Replacement No  Description of Work Replaced 8 Hex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure X		Component	Hanuracture	Serial no.	NO.	Identification	Built	or Replacement	
Description of Work Replaced 8 Hex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure			i	· ·	·				or NO)
Description of Work Replaced 8 Hex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure								Ĺ	
Description of Work Replaced 8 Hex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure		(9)							
Description of Work Replaced 8 Hex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure	BOLL	(o ea)	cardinal		N/A	PSV-4406	1989	Replacement	No
Description of Work Replaced 8 Hex Bolts and 12 Nuts on PSV-4406 during installation.  Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure	-Flex	loc (12 ea)	Target Rock		W/A	DSV-4406		Pont coment	u_
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Tests Conducted: Hydrostatic Pneumatic Mominal Operating Pressure			,						
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Tests Conducted: Hydrostatic Pneumatic Mominal Operating Pressure		Description of	Uork Denisord 9	Hay Balka and	43 14	Maria / / / / / / / / / / / / / / / / / / /			
		beset the for or	WOLK Keptaced o	nex bolts and	IZ NUTS ON F	25V-44Ub during in	stai lat 1	on.	
			·			•		•	
		Tests Co <b>nduc</b> ted	: Hydrostatic	Pneur	matic	Nominal (	Operating	Pressure	₽T
Other Pressure 1026 psi Test Tamp. 206 °F			<del></del>	٠ -		<u> </u>	,	, ,	<b>=</b>
		-	Other	Pressure	1026	psi Test Tam	р	206 °F	
			_						

NOTE: Supplemental sheets in form of lists, sketchos, or drawings may be used, provided (1) size is 8% 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.



9.	Remsrks MSRV Pilot Valve S/N 227 was removed for testing. S/N 203 was installed. During installation it was Applicable Manufacturer's Data Reparts to be attached
	required to replace the Hex Bolts and Nuts due to damage. A preservice VT-1 (Rpt# 90-198) of the replacement
	bolting and a VT-2 (Rpt# 89-13) was conducted and accepted. The installed pilot valve S/N 203 was repaired durin
	testing at Wyle Labs (ref. HIS-2 10-90-06).
	CERTIFICATE OF COMPLIANCE
	We certify that the statements made in the report are correct and this <u>replacement</u> conforms to the rules of the ASME Code, Section XI. repair or replacement.
	Type Code Symbol Stamp Nona
	Certificate of Authorization No. <u>None</u> Expiration Date <u>None</u>
	Signed Surudu Shaufa codes & Materials, TGL Date 9-26-
	CERTIFICATE OF INSERVICE INSPECTION
	I, the undersigned, holding a valid commission issued by the Hational Board of Boiler and Pressure Vessel Inspectors and the State or Province of and employed by Hartford Steem Boiler I&I Co of Hartford, Connecticut have inspected the components described in
	this Owner's Report during the period \( \frac{\
	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.
	Inspectors Signature Commissions NB 8829(I)(N) 941-IA  National Board, State, Province, and Endorsements
	Date

	Owner <u>Iowa Elec</u>	tric Light and Por Name	wer		Date <u>Septem</u>	<u>ber 26,</u>	1990	·
	D O Barr 754 - 6		2/04		Chant 1 -4	2		
	P.O.Box 351, C	<u>edar Rapids, IA 5</u> Address			Sneet 1 of		,	
	Plant Duane Arn	old Energy Center			Unit1			
		Name				*		
		Palo, IA 52324				DCP	1457, P.O. B0236	8
	Address	,				Repair	1457, P.O. B0236 Organization P.O.	10.,JOD NO.
	Work Performed	by <u>Iowa Electric</u> Name	* .		Type Code Symbol	Stamp_	None	
					Authorization No.	·	None	
	7077		·					
	32// DAEC ROAD	Palo, IA 52324 Address			Expiration Date		None	
	Idontification			43				
	identification	of System Recip	rc Pump A (Cla	as I)			·	
	(a)Applicable C	onst. Code ASME Se	ection III	19 68	Edition. W6	А	Addenda	N/A Coo
	Case (class C	)					_	
	(b)Applicable E	dition of Section	XI-Utilized f	or Repairs o	or Replacements 19	80 W81	class 2	
	(c)rabilitation (	of Item performed	under <u>section</u>	ou 111 1993	Edition, 584 Add	enda (cu	ass 1)	
	Identification	of Components Repa	aired or Repla	ced and Repl	acement Component	s		
					1		<u> </u>	
				National			Repaired	ASME Code
	Name of	Name of	Manufacturer		Other	Year	Replaced,	Stamped
	Component	Manufacture	Serial No.	No.	Identification	Built	or Replacement	(Yes or No)
	,		,					
er/H		BW/IP Intl.	20/077					<del>  </del>
many	er Assembly*	BW/IP Intl.	206873 HT #	N/A	1P-201A	1990	Replacement	No
e St	ud (16 each)	INC.	94910 HT #	N/A	1P-201A	1990	Replacement	No
e Nu	t (16 each)	INC.	B5499	N/A	1P-201A	1990	Replacement	No
								·
			- <del> </del>		.1	L	.1	L
tion	XI Items of the	e assembly include Work <u>Replacod Cov</u>	the pump cove	er, Ht. Exch	. cover and HT. ex	xch. coi	t	
		NO. K KEPKUCOG COV	CT / HEAL EXCITA	inger Assembl	y for kecire pump			·
	Tests Conducted:	: Hydrostatic	☐ Pneur	natic	□ Nominal (	Operatio	n Pressure	
			<u>니</u>		ليا	•		× ,
		Other	Pressure	1026	psi Test Ten	P	206 °F	
	NOTE: 0	tal sheets in form						



CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Cede Symbol Stamp None  Certificate of Authorization No. None  Signed Codes & Materials, TGL Date 11-16 %  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 Inspectors and the State or Province of IOMB and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrections are described in the 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 in concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	screws	s was preformed under ISI numbers 89-279, 89-282, and 89-283. For information on recirc pump 1P-201	B_see_
We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Cede Symbol Stamp None  Certificate of Authorization No. None  Signed Survey Codes & Materials, TGL Date 11-16 %  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of Iowa and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Owner's Report during the period 1-20-10 to 1-19-10 yand state that to the best of my knowledge and belief, the Owner has performed examinations and taken corr measures described in the 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 im concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.			
We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Cede Symbol Stamp None  Certificate of Authorization No. None  Signed Survey Codes & Materials, TGL Date 11-16 %  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of Iowa and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described in the Owner's Report during the period 1-20-10 to 1-9-1	NIS2 1	10-90-55.	
Type Cede Symbol Stamp None  Certificate of Authorization No. None  Signed Codes & Materials, TGL Date  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of Iowa and employed by Hartford Steam Boiler this Owner's Report during the period 2-20-10 to 1-2-10 to 1-2-10 years.  By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or im concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connegted with this inspection.		CERTIFICATE OF COMPLIANCE	
Certificate of Authorization No. None Expiration Date  Signed Survey Codes & Materials, TGL Date 11-16 %  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of Iowa and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components described with the Dwner's Report during the period 2-20-75 to 1-2-9-75 to 1-2-9-75.  By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or im concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a large wind arising from or connected with this inspection.	to t	We certify that the statements made in the report are correct and this <u>replacement</u> he rules of the ASME Code, Section XI. repair or replacement	confo
Signed Survival Sharper Codes & Materials, TGL Date 11-16 %  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of Iowa and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components descrithis Owner's Report during the period 7-20-10 to 1-10-10 to 1-		Type Cede Symbol Stamp None	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of Iowa and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components descrit this Owner's Report during the period 2-20-7 to 1-9-8 and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corn measures described in the 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 im concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.		Certificate of Authorization No. None Expiration Date	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of and employed by _Hartford Steam Boiler of Hartford, Connecticut have inspected the components description of to		Signed Sumular Sharing Codes & Materials, TGL Date 11-16 8.	_, 19
Inspectors and the State or Province of Iowa and employed by Hartford Steam Boiler of Hartford, Connecticut have inspected the components description of this Owner's Report during the period 7-20-7 to 1-19-9-7 to 1-19-9-7 and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corresponding to 1-19-9-7 to 1		CERTIFICATE OF INSERVICE INSPECTION	
By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or im concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	Insp	pectors and the State or Province of Iowa and employed by Hartford Steam Boil of Hartford, Connecticut have inspected the components des	er [&[ cribed
concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	, an	d state that to the best of my knowledge and belief, the Owner has performed examinations and taken of Sures described in the Owner's Report in accordance with the requirements of the ASME Code, Section	XI.
	conc	perning the examinations and corrective measures described in this Owner's Report. Furthermore, no sector nor his employer shall be liable in any manner for any personal injury or property damage or kind arising from or connected with this inspection.	either a loss
Inspectors Signature National Board, State, Province, and Engors		Inspectors Signature Commissions NB 8829(I)(N) 941-IA  National Board, State, Province, and Enc	lorseme

			2		· <u>.</u>		
Owner 10	WA ELFCTRIC	LIGHT & P	OWER	· Dete3	/31/90 · g	heet $\frac{1}{}$ of $\frac{1}{}$	
Plant DU	ANE ARNOLD E		TER	Unit_	DAEC UNIT (	ONE	
Palo, Iow				Regali	Croenia	ation, PO No	
	Addr			1 ype	rode alwo	ol Stand None	Job No. etc:
	r <b>formed By</b> <u>ION AVE.</u> , VER			Author	rization	No	
30 <u>0 2. VERN</u>	Addre		30036	Expir	ation Det	•	
Identif	ication of	Syetem	RECIRCULA	ATION PUMP			
(c) Original	icable Edit ginal Const	Code_C	rsme XI L.C 19	68 Edition	Repaire on WINTER	Addenda <sup>1968</sup> Co or Replacement Addenda <sup>1968</sup> (	19 N/A
. Identif	ication of	Componer	nt Repai	red or R	eplaced a	nd Replaced Con	mponents
Name of Component	Name of Manuf.	Manuf, 9/N	Nat. Board No.	Other Ident.	Year Built	Repaired, Replaced, Replacement	ASME Code Stamped Yes/No
•	BW/IP INTL. INC.	206873	N/A	891 <b>-</b> L-850	9 1990	REPLACEMENT	NO
igned(	ther the	CE statement sments of	RTIFICA ts made of P.O.#	TE OF COI	1PLIANCE report as	t to Be Attache re correct and ed, Replaced (o	this TOWN
I, the ur of Boiler	ndersigned,	CER1	IFICATE a vali	d commiss	nd the St.	ed by the Natio	CALIFORNIA
component _10-25-8	9 to 3-31-	IGHT MUTU 90	AL INS CC S repai	of <u>Norwood</u> r organia	MASS lation rep	have insport during the	pected the period
carrective with the	requirement	organiza describ ts of th	ed in t Oe Owner	the Repair 's P.O.B	<b>ned exami:</b> Organiz: 02368 REV.1	nations and tak ation Report in	on accordance
By eignir warranty,	ng this cer . expressed	tificate   or impl	neithe	r the ins	pector no	or his employer	rractive
messures	described	in this	Repair	Organizat	tian Repai	rt. Furthermor	a neither
ury or	retor or ni r property pection.	demage o	rer shall or loss	of any ki	ind arisi	y manner for an ng from or conn	y personal ected with
	ors Signat	Con	mission	1275		Det	·3-31-90
inapac (	ora arduat	.ur#		NB, 514	e,Proven	e, Endorse.	-

•	Owner <u>lowa Electr</u>	ic Light and Pow Name	4er		Date <u>Septem</u>	<u>per 26,</u>	1990		
	P.O.Box 351, Ceo	dar Rapids, IA 52 Address			Sheet 1 of	2			
	Plant <u>Duane Arnol</u>				Unit <u>1</u>				
	·	Neme							
	3277 DAEC Rd. P	Palo, IA 52324			-		<u>1457, P.O. B0236</u> Irganization P.O.M		<del>.</del>
	Work Performed by			· · · · · · · · · · · · · · · · · · ·	Type Code Symbol	Stamp	None		
		Name			Authorization No.		None		
	3277 DAEC Road P	Palo, IA 52324 Address		<del></del>	Expiration Date _	<del></del>	None		
	Identification of	f System <u>Reci</u>	rc Pump B (Cla	as 1)					
	Case (class C) (b)Applicable Edi	ition of Section	XI Utilized f	or Repairs	Edition, <u>W6</u> or Replacements 19 Edition, <u>S84</u> Adde	80 W81	class 2	N/A	_Cod
		<u>-</u>							
r	Identification of	f Components Repo	aired or Repla	ced and Rep	lacement Component	s			
	Identification of Name of Component	Name of Manufacture	aired or Repla Manufacturer Serial No.	National	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)	
	Name of	Name of	Manufacturer	National Board	Other	Year	Replaced,	Code Stamped (Yes	
over/	Name of Component	Name of Manufacture BW/IP Intl. INC.	Manufacturer Serial No.	National Board	Other	Year	Replaced,	Code Stamped (Yes	
Cover/ Exchan	Name of Component	Name of Manufacture  BW/IP Intl. INC. BW/IP Intl. INC.	Manufacturer Serial No. 206812 HY # 94910	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)	
Cover/ Exchan	Name of Component Heat nger Assembly*	Name of Manufacture BW/IP Intl. INC. BW/IP Intl.	Manufacturer Serial No. 206812	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)	
Cover/ Exchan	Name of Component Heat Iger Assembly*	Name of Manufacture  BW/IP Intl. INC. BW/IP Intl. INC. BW/IP Intl.	Manufacturer Serial No. 206812 HT # 94910 HT #	National Board No. N/A	Other Identification	Year Built 1990	Replaced, or Replacement  Replacement  Replacement	Code Stamped (Yes or No) No	
Cover/ Exchan Case S Case N	Name of Component  Heat ager Assembly* Stud (16 each)  Jut (16 each)	Name of Manufacture  BW/IP Intl. INC. BW/IP Intl. INC. BW/IP Intl. INC.	Manufacturer Serial No. 206812 HY # 94910 HY # B5499	National Board No. N/A N/A N/A	Other Identification  1P-2018  1P-2018	Year Built 1990 1990	Replaced, or Replacement  Replacement  Replacement  Replacement	Code Stamped (Yes or No) No	
Case N	Name of Component  Heat ager Assembly* Stud (16 each)  Jut (16 each)	Name of Manufacture  BW/IP Intl. INC. BW/IP Intl. INC. INC. assembly include ork Replaced Co	Manufacturer Serial No.  206812 HY # 94910 HY # B5499  e the pump covver/Heat Excha	National Board No. N/A N/A N/A	Other Identification  1P-2018  1P-2018  1P-2018	Year Built 1990 1990	Replaced, or Replacement  Replacement  Replacement  Replacement	Code Stamped (Yes or No) No	

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FORM NIS-2 (Back) sheet 2 of 2

Preservice of	the pump studs were perform	rmed under 89-277. Prese	rvice VT-1 of the fla	ange surface, pump nuts
screws was pr	eformed under ISI numbers 8	89-280, 89-281, and 89-2	34. For information o	on recirc pump 1P-201A s
NISZ 10-90-54	<u>•                                      </u>			
	<del> </del>		· · · · · · · · · · · · · · · · · · ·	
,		CERTIFICATE OF COM	PLIANCE	
	tify that the statements ma			
to the rule	s of the ASME Code, Section	n XI.	гера	air or replacement
c	ada Cambal Obassa - Nasa			
iype C	ode Symbol Stamp <u>None</u>			
Certif	icate of Authorization No.	None	<u> </u>	Expiration Date
Signed	Sumder 8	haufa codes & 1	Materials, TGL Date	11-16 -
-	Owner or Owner's Designee	e, Title U		
		CERTIFICATE OF INSERVICE	INSPECTION	
I, the under	ersigned, holding a valid	commission issued by t	he National Board of	f Boiler and Pressure
of	and the State or Province of Hartford, C	Connecticut	have inspecte	d the components descri
this Owner'	s Report during the period that to the best of my know	J-28-	toto	1/-/9-99
measures de	scribed in the Owner's Repo	ort in accordance with the	ne requirements of th	e ASME Code, Section XI
By signi	ng this certificate naither	r the Inspector nor his	employer makes any wa	rranty, expressed or im
concerning	the examinations and corrector his employer shall be li	ctive measures described	in this Owner's Repo	rt. Furthermore, neith
any kind ar	ising from or connected wit	th this inspection.	ny personat injury of	property damage or a t
So	oth fairly	^ _ Commissions	NB 8829(I)(N) 94	1-14
Ins	pectors Signature	Commission	National Board, Stat	e, Province, and Endors
	200. 19 19 98	ν		•
1 2-2- 2	1110	7		

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	Owner IC	WA ELECTRIC	LIGHT & P	OWER	Dete 30	0 Mar 90 s	heet $\frac{1}{}$ of $\frac{1}{}$	- MAR 990
2.	Plent D	JANE ARNOLD E		TER	Unit_D	AEC UNIT O	NE	350
	Palo To	wa 52324	<b>L</b> ME		Penale	Organia	1100 90 No 1	
	1010, 10	Addre	188		Type	Code Symb	ation, PO No. J	ob No. etc
١.	Work Pe	rformed By	EW/IP INT	L., INC	Author	rization	No	
	2300 E. V	PERNON AVE, V		90058	Expira	ation Dat	•	
	Identif	ication of		RECIRCULA	TION PULTP		•	
	(e)Appl	icablo Cons	st. Code	CL.C 19	68 Editi		Addenda 1968 Co	
•	(c) Ori	ginal Const	Code	CL.C 196	8_Editio	on, WINTER	ar Replacement Addenda <sup>1968</sup> C nd Replaced Con	ode CaseN/
	Name of omponent	Name of Manuf.	Manuf. S/N	Nat. Board No.	Other Ident.	Year Built	Repaired, Replaced, Replacement	ASME Cod Stamped Yes/No
	•	BW/IP INTL.	206812	N/A	891-L-850	9 1990	REPLACEMENT	NO
<u>.</u>		nducted (X)	)Hydrost	atic ( )	Preumetic	c Nominal	GER ASSEMBLY Operating Pres	
AS	SEMBLY Descrip Test Co	tion of Wor nducted (X) TITEM HAS BEE	Hydrost Other On Fabrica	atic ( )	Preumetic Pressur CORDANCE V	Nominal re <u>1875</u> pe WITH ASME S		1983
AS	SEMBLY Descrip Test Co Remarks certif conforme	tion of Wornducted (X) TITEM HAS BEE App	Other N FABRICA Dicable Ci statements Designed	ATED IN AC Manufac ERTIFICA nts made of P.O.# Date e/Title	Pressur CORDANCE V turers Da TE OF COM in this 205-89E500	Nominal re_1875_pe WITH ASME S ate Repor MPLIANCE report 0Repair M_90	Operating President Temp. 68 SECTION III, CL.1, to Be Attached to Correct and ed, Replaced (c	1983 '8
AS	Descrip Test Co Remarks certif conforme igned (  I, the u of Boile and empl componen (0-25- belief, correcti with the By signi warranty mesures the Insp	tion of Wornducted (X) nducted (X) nducted (X) TIPM HAS BEE App  App  The Has bee	Other Display Control Statements Control Statements CER CONTROL Sure Ves CIGHT MITT CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ves CONTROL Sure Ve	TED IN AC  Manufac  ERTIFICA  THE MADE  OF P.O.#  Date  E/Title  TIFICATE  Q a vali  Sel Insp  IAL INS.CY  is repair  and state  ation had in the  che neither  lied, co	Pressur CORDANCE V turers Da TE OF CON in this 205-89E500 30 MACC OF SHOP d commis- ectors and or organi is that to sperfor the Repeir the Repeir organiza organiza organiza organiza organiza organiza organiza organiza organiza	Nominal re 1875 per 1	Operating Press in Test Temp. 68 SECTION III, CL.1, t to Be Attache  are correct and ed, Replaced (co.  ON sed by the Nation atte or Provence have insert during the port during the set of my knowled action Report is	this ITEM or Modified on al Board the period de and ten accordence of the period ten accordence of the

	Owner <u>Iowa Elec</u>	tric Light and Po	wer		Date Oct 1,	1990		······································
	P.O.Box 351, 0	Cedar Rapids, IA 5 Address			Sheet 1 of	2		
•	Plant <u>Duane Arr</u>	nold Energy Center Name		· · · · · · · · · · · · · · · · · · ·	Unit 1			
	3277 DAEC Rd.	Palo, IA 52324			PMAR 1043204			
	Address			· · · · · · · · · ·			Organization P.O.)	NoJob No.
	Work Performed	by <u>Iowa Electric</u>			Type Code Symbol			
		Name			Authorization No.	•	None	·
	3277 DAEC Rd.	Palo, IA 52324 Address			Expiration Date		None	
	Identification	of System <u>Main</u>	Steem (class	1)		<del></del>		
	Case (b)Applicable E *GE Spec 21A920	Const. Code_SECT	XI Utilized f	or Repairs	or Replacements 19	80 W81	<u> </u>	Coo
								ASME
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	Code Stamped (Yes or No)
RV Pil				Board			Replaced,	Code Stamped (Yes
	Component	Manufacture	Serial No.	Board No.	Identification	Built	Replaced, or Replacement	Code Stamped (Yes or No)
	Component ot Valve	Manufacture Target Rock	Serial No.	Board No.	Identification	Built 1975	Replaced, or Replacement	Code Stamped (Yes or No)
	Component ot Valve	Manufacture Target Rock	Serial No.	Board No.	Identification	Built 1975	Replaced, or Replacement	Code Stamped (Yes or No)
	Component ot Valve	Manufacture Target Rock	Serial No.	Board No.	Identification	Built 1975	Replaced, or Replacement	Code Stamped (Yes or No)
	ot Valve	Manufacture Target Rock	Serial No. S/N 226 S/N 201	Board No.	Identification PSV-4401 PSV-4401	1975 1975	Replaced, or Replacement  Replaced  Replacement	Code Stamped (Yes or No)
	ot Valve	Manufacture  Target Rock  Target Rock  Work Replaced MSR	Serial No. S/N 226 S/N 201	Board No. N/A N/A	PSV-4401 PSV-4401	1975 1975 1975	Replaced, or Replacement  Replaced  Replacement	Code Stamped (Yes or No)  Yes  Yes
	ot Valve ot Valve Description of	Manufacture  Target Rock  Target Rock  Work Replaced MSR	Serial No.  S/N 226  S/N 201	Board No. N/A N/A	PSV-4401 PSV-4401	1975 1975 1975 s/n 201	Replaced, or Replacement  Replaced  Replacement	Code Stamped (Yes or No)  Yes  Yes

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ in. x 11 in.,(2)information in items 1 through 6 on this repart is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.





	. <del></del> -			<del></del>
	•	CERTIFICATE OF COMPL	TANCE	
	certify that the statements made rules of the ASME Code, Section		ect and this <u>replacement</u> repair or repla	
ТУ	pe Code Symbol Stamp <u>None</u>			
	gned Sumder Solver or Owner's Designee	haufai Codes & Ma	terials, TGL Date 10-	
		CERTIFICATE OF INSERVICE	INSPECTION	
Inspect	undersigned, holding a valid ors and the State or Province of of <u>Hartford, Connect</u> mer's Report during the period	f IOWA	and employed by Hartford St	te <b>em</b> Boiler 1
, and st	mer's Report during the period sate that to the best of my knowl a described in the Owner's Repo	ledge and belief, the Owne	r has performed examinations a	nd taken corr
concern Inspect	igning this certificate neither ing the exeminations and correct or nor his amployer shall be list diarising from or connected with	tive measures described in able in any manner for any	n this Owner's Report. Further personal injury or property of	ermore, neith damage or a l
		Commissions_		

2.0.Box 351, Cec	ric Light and Pol Name dar Rapids, IA 52 Addresa		<del> </del>	Date Oct. 4			<del></del>
		2406		•			
				Sheet <u>1 of</u>	2		
ant Duane Arnol			···			· · · · · · · · · · · · · · · · · · ·	
	ld Energy Center Name	<u></u>		Unit 1			
277 DAEC DO S	Palo, IA 52324			PMAR 1043206			
	PACO, IN 32324					Occasionation B C )	la lab Na
							10.,300 NO.
ork Pertormed by	Name				-	·	
				Authorization No.	·	None	
277 DAEC Rd. F	Palo, IA 52324			Expiration Date _		None	
• • •	Address						
lentification of	f System <u>Main</u>	Steam (class	1)				
)Applicable Cor	nst. Code SECT. I	11	19 68	Edition, S69		Addenda. N/A	
is <b>e</b> .							
dentification of	f Components Repa	ired or Repla	ced and Rep	lacement Component	s 		
ame of mponent	Name of Manufacture	Manufacture Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
<b>)</b>	Tardinal	HT#8869139	N/A	PSV-4403	1989	Replacement	No
<b>)</b>	Tardinal	HT#KB4290	N/A	PSV-4403	1989	Replacement	No
		<u> </u>					
(10 mm)							
scription of 40	ork Replaced 12	Nuts and & St	urde on PSV-/	Letoni aginub 502	lation		
301 . pt. 31 . 31 w	NK KEPTECES IE	Mets and 0 st	dds dii PSV-4	HOS OUT THE THELE	tation.		
sts Conducted:	H <b>ydr</b> ostatic	Pneur	matic	□ Nominal C	<b>lne</b> ratin	a Draggura	×
ı	Other	Pressure	1026	لسا psi Test Tam	· ·	_	
	277 DAEC Rd.	rk Performed by Iowa Electric Name  277 DAEC Rd. Palo, IA 52324 Address entification of System	Address  Sentification of System Main Steam (class  Applicable Const. Code SECT. III  se  Applicable Edition of Section XI Utilized for sentification of Components Repaired or Replatement Manufacture Serial No.  Tardinal HT#8869139  Tardinal HT#KB4290  Secription of Work Replaced 12 Nuts and 6 State Conducted: Hydrostatic Pneus	Address entification of System Main Steam (class 1)  Applicable Const. Code SECT. III 19 68 se PApplicable Edition of Section XI Utilized for Repairs of Section of Components Repaired or Replaced and Replaced and Replaced and Replaced and Replaced and Replaced for Manufacture Serial No.  Tardinal HT#8869139 N/A  Tardinal HT#KB4290 N/A  Scription of Work Replaced 12 Nuts and 6 Studs on PSV-4 sts Conducted: Hydrostatic Pneumatic	Type Code Symbol Name    Name	Type Code Symbol Stamp_ Authorization No	Type Code Symbol Stamp None    Name

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performed and a	ccepted. After install	lation a VT-2 (Rpt# 89	-13) was conduct	ed and accepted.
·		34574611		7.7
		CERTIFICATE O	F COMPLIANCE	
	ify that the statements of the ASME Code, Sect		re correct and th	is <u>replacement</u> repair or replacement
Туре Со	de Symbol Stamp <u>Non</u>	ie	<u> </u>	<del></del>
Certifi	cate of Authorization N	o. <u>None</u>		Expiration Dat
Signed	Owner or Owner's Desig	Perfood nee, Title	es & Materials, 1	IGL Date
I. the under	rsigned holding a val	CERTIFICATE OF INS		Board of Boiler and Press
Inspectors ar	nd the State or Provinc Hartford, Com Report during the peri	e of <u>IOWA</u> necticut	and am have	ployed by <u>Hartford Steam Boi</u> e inspected the components de to
, and state t	hat to the best of my kr	nowledge and belief, t	he Owner has perf	ormed exeminationa and taken ents of the ASME Code, Section
By signing	ne examinationa and cor r his employer shall be sing from or connected	rective measures desc liable in any manner with this inspection.	ribed in this Owr for any personal	kes any warranty, expressed oner's Report. Furthermore, or injury or property damage o
Inspector no		1/1/ Campi	ssions <u>NB 8829(I)</u>	(N) 941-IA Dard, State, Province, and E
Inspector not any kind aris	ectors Signature	Commit	National Bo	

	D 0 0 754	Name	:2/04		Ohana 4 -4	•		
	P.O.Box 351, 0	<u>Cedar Rapids, IA 5</u> Add <b>re</b> ss			Sheet 1 of	2		
	Plant Duane Arr	nold Energy Center			Unit <u>1</u>		<del></del>	<u> </u>
		Name						
	3277 DAEC Rd. Addres:	Palo, IA 52324		***************************************	DCP-14	76	Organization P.O.	No. Joh No.
		_				``	_	MO.,JOD MO.
	Work Performed	by General Electr	ic Co.	<del></del>	Type Code Symbol	Stamp	None	<del> </del>
					Authorization No	•	None	
•	2311 W. 22nd S	ST., Oak Brook IL. Address			Expiration Date		None	
	Identification	of System <u>Main</u>	Steam 'A' (cl	ass 1)				
	(a)Applicable (	Const. Code <u>*ANSI</u>	B31.1	19 67	Edition, N	I/A	Addenda, N/A	C
	Case	dition of Section						
		Spec. 21A9230 Re		or Acpairs	or representative is	<u>00 NG1</u>	<del></del>	
	Identification	of Components Rep	aired or Repla	ced and Reo	lacement Component	'e		
	Identification	of Components Rep	aired or Repla	ced and Rep	lacement Component	:s		
	Identification  Name of Component	of Components Rep Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacament	ASME Code Stamped (Yes or No)
sc-p	Name of	Name of	Manufacturer	National Board	Other	Year	Replaced, or Replacament	Code Stamped (Yes or No)
sc	Name of Component diston assembly	Name of Manufacture General Elect. General Elect.	Manufacturer Serial No. 215585-6 6062065-62	National Board No. N/A	Other Identification CV-4412	Year Built 1990	Replaced, or Replacament Replacement Replaced	Code Stamped (Yes or No) No
sc	Name of Component diston assembly	Name of Manufacture General Elect.	Manufacturer Serial No. 215585-6	National Board No.	Other Identification	Year Built	Replaced, or Replacament	Code Stamped (Yes or No)
sciston	Name of Component	Name of Manufacture General Elect. General Elect.	Manufacturer Serial No. 215585-6 6062065-62	National Board No. N/A	Other Identification CV-4412	Year Built 1990	Replaced, or Replacament Replacement Replaced	Code Stamped (Yes or No) No
isc iston	Name of Component iston assembly	Name of Manufacture General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-6 6062065-62 6062065-50	National Board No. N/A N/A N/A	Other Identification CV-4412 CV-4412 CV-4412	Year Built 1990 1985 1985	Replaced, or Replacament  Replacement  Replaced  Replaced  Replaced	Code Stamped (Yes or No) No No
isc-prisc istom	Name of Component iston assembly	Name of Manufacture  General Elect. General Elect. General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-6 6062065-62 6062065-50 214856-21 214856-17 N/A	National Board No. N/A N/A N/A N/A	Other Identification  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412	Year Built 1990 1985 1985 1990	Replaced, or Replacament Replacement Replaced Replaced	Code Stamped (Yes or No) No
isc-prisc istom	Name of Component iston assembly	Name of Manufacture  General Elect. General Elect. General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-6 6062065-62 6062065-50 214856-21 214856-17	National Board No. N/A N/A N/A	Other Identification  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412	Year Built 1990 1985 1985 1990	Replaced, or Replacement Replacement Replaced Replaced Replaced	Code Stamped (Yes or No)  No No No No
isc iston cem D onnet cem\s	Name of Component  iston assembly  isc  tem disc assemb. onal Guide Pads	Name of Manufacture  General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-6 6062065-62 6062065-50 214856-21 214856-17 N/A 6053657-125 N/A	National Board No. N/A N/A N/A N/A N/A N/A	Other Identification  CV-4412 CV-4412 CV-4412 CV-4412 CV-4412 CV-4412 CV-4412 CV-4412	Year Built 1990 1985 1985 1990	Replaced, or Replacement Replaced Replaced Replaced Replaced Replacement Replacement	Code Stamped (Yes or No)  No No No No No
sc ston cem D onnet cem\s	Name of Component  iston assembly  isc  tem disc assemb. onal Guide Pads (Zea)	Name of Manufacture  General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-6 6062065-62 6062065-50 214856-21 214856-17 N/A 6053657-125 N/A RI-VB23	National Board No. N/A N/A N/A N/A N/A N/A	Other Identification  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412	Year Built 1990 1985 1985 1990 1990 1971 1988	Replaced, or Replacement  Replacement Replaced Replaced Replacement Replaced Replaced Replaced Replaced Replaced	Code Stamped (Yes or No)  No No No No No No No No No No No No No
scem D  cem D  cem D  cem\s  dditi	Name of Component  iston assembly  isc  tem disc assemb.  onal Guide Pads (Zea)	Name of Manufacture  General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. Castle Metals	Manufacturer Serial No. 215585-6 6062065-62 6062065-50 214856-21 214856-17 N/A 6053657-125 N/A RI-VB23 Ht#IN85326	National Board No. N/A N/A N/A N/A N/A N/A	Other Identification  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412	Year Built 1990 1985 1985 1990 1971 1988	Replaced, or Replacement  Replacement Replaced Replaced Replacement Replaced Replaced Replaced Replaced Replaced	Code Stamped (Yes or No)  No No No No No No No No No
isc-prisc istomnet tem 0 ponnet tem\s	Name of Component  iston assembly  isc  tem disc assemb.  onal Guide Pads (Zea)	Name of Manufacture  General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-6 6062065-62 6062065-50 214856-21 214856-17 N/A 6053657-125 N/A RI-VB23 Ht#IN85326 disk-piston, ar	National Board No. N/A N/A N/A N/A N/A N/A	Other Identification  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412	Year Built 1990 1985 1985 1990 1971 1988	Replaced, or Replacement  Replacement Replaced Replaced Replacement Replaced Replaced Replaced Replaced Replaced	Code Stamped (Yes or No)  No No No No No No No No No
isc iston tem D onnet onnet tem\s	Name of Component  iston assembly  isc  tem disc assemb.  onal Guide Pads (Zea)	Name of Manufacture  General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. More Metals Work The bonnet, added under C	Manufacturer Serial No. 215585-6 6062065-62 6062065-50 214856-21 214856-17 N/A 6053657-125 N/A RI-VB23 Ht#IN85326 disk-piston, ar	National Board No. N/A N/A N/A N/A N/A N/A N/A N/A	Other Identification  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412  CV-4412	Year Built 1990 1985 1985 1990 1971 1988 1990 replace	Replaced, or Replacement  Replacement Replaced Replaced Replacement Replaced Replaced Replaced Replaced Replaced Replaced Replaced Applaced Replaced Replaced Applaced Replaced Applacement Applacement Applacement Applacement Applacement Applacement Applacement Applacement Applacement Applacement Applacement Applacement Applacement Applacement Applacement	Code Stamped (Yes or No)  No No No No No No No No No

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CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None  Expiration Date No.  Signed 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 Inspectors and the State or Province of IONA and employed by Hartford Steam Boiler I have inspacted the components described in the Owner's Report during the period Towns knowledge and belief, the Owner has performed examinations and taken correspondence with the requirements of the ASME Code, Section XI.  By signing this certificate neither the Inspector nor his employer massage or a lany kind arising from or connected with this inspection.	CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement confit to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None Expiration Date None  Signed Codes & Materials, TGL Date 11-14-14  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 Verence of 10MA and employed by Hartford Steam Boiler 1&1 have inspected the components described this Owner's Report during the period 2 2 to 10 10 10 10 10 10 10 10 10 10 10 10 10	dditionally, four guide pads were welded on the		
CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Codes & Materials, TGL Date 11-16-  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 Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler I have inspacted the components described in the Owner's Report during the period 2 7 7 8 100 100 100 100 100 100 100 100 100 1	CERTIFICATE OF COMPLIANCE  We certify that the statements made in the report are correct and this replacement confit to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None Expiration Date None  Signed 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 Ve Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler I&I of Hartford, Connecticut have inspected the components described this Owner's Report during the period Town Keeper Connecticut And the Code, Section XI.  By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or imple concerning the examinations and corrective measures described in the Owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a los any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	Rea) and Nuts (4ea) were required to be replaced	during re-assembly. A VT-1	(90-246) and VT-3(90-247) examinat
We certify that the statements made in the report are correct and this repair or replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None Expiration Date None  Signed Codes & Materials, TGL Date II-II-II  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 Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler I have inspacted the components described in the Dwarer's Report during the period 7 7 10 to III-III  By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or in concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	We certify that the statements made in the report are correct and this replacement confidence to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Codes & Materials, TGL Date IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	as performed and accepted. A VT-2(89-13) was con	mpleted and accepted after i	re-assembly.
We certify that the statements made in the report are correct and this replacement to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None Expiration Date None  Signed 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 Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler In Ave inspacted the components described in the bost of my knowledge and belief, the Owner has performed examinations and taken correcting the examinations and corrective measures described in the Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	We certify that the statements made in the report are correct and this replacement confit to the rules of the ASME Code, Section XI.  Type Code Symbol Stamp None  Certificate of Authorization No. None Expiration Date None  Signed Commer's Designee, Title  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Verence and the State or Province of IOMA and employed by Hartford Steam Boiler 181 of Hartford, Connecticut have inspacted the components described in the Owner's Report of Inspectors and the State of my knowledge and belief, the Owner has performed examinations and taken correct measures described in the 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 implications and corrective measures described in this Owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a los any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA			
Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Symbol Stamp None  Certificate of Authorization No. None  Certificate of Authorization No. None  Signed Symbol Stamp None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate of Authorization No. None  Certificate Of INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of IONA and employed by Hartford Steam Boiler I have inspected the components described in Suner's Report during the period Type Tolding National State that to the bost of my knowledge and belief, the Owner has performed examinations and taken cormeasures described in the 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 in concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	Type Code Symbol Stamp None  Certificate of Authorization No. None  Signed Signed Comer's Designee, Title  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Versions and the State or Province of 10MA and employed by Hartford Steam Boiler 181 of Hartford, Connecticut have inspacted the components described this Owner's Report during the period 27 to 1/-/7 And state that to the bost of my knowledge and belief, the Owner has performed examinations and taken correct measures described in the 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 implement on the implementation of the ASME Code, Section XI.  By signing the examinations and corrective measures described in this Owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a los any kind arising from or connected with this inspection.  Commissions NB 8829(1)(N) 941-IA	CERT	IFICATE OF COMPLIANCE	
Certificate of Authorization No. None Expiration Date No.  Signed Sumular Succession Codes & Materials, TGL Date 11-16-  Owner or Owner's Designee, Title  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler I of Hartford, Connecticut have inspacted the components described in the Duner's Report during the period 27 ft of this Owner's Report during the period and state that to the bost of my knowledge and belief, the Owner has performed examinations and taken corressures described in the 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 in concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	Certificate of Authorization No. None Expiration Date None  Signed Codes & Materials, TGL Date 11-16-  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 Verence of 10MA and employed by Hartford Steam Boiler 1&1 have inspacted the components described this Owner's Report during the period 27 have inspacted the components described that to the bost of my knowledge and belief, the Owner has performed examinations and taken correct measures described in the 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 imple concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a los any kind arising from or connected with this inspection.  Commissions NB 8829(1)(N) 941-1A		report are correct and this	replacement confo
Signed Summer's Designee, Title  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of IOWA and employed by Hartford Steam Boiler I of Hartford, Connecticut have inspected the components described in the Owner's Report during the period and belief, the Owner has performed examinations and taken corneasures described in the 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 in concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	Signed Survey Codes & Materials, TGL Date 11-16-  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 Verence of 10MA and employed by Hartford Steam Boiler 1&1 have inspacted the components described this Owner's Report during the period 7 for this Owner's Report during the period 7 for measures described in the 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 implection in the owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a los any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	Type Code Symbol Stamp None		
Signed Summer's Designee, Title  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler I of Hartford, Connecticut have inspacted the components describthis Owner's Report during the period 7 to to to to to to to to to to to to to	Signed Summer's Designee, Title  CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Verence of IOWA and employed by Hartford Steam Boiler 181 have inspacted the components described this Owner's Report during the period to to this Owner's Report during the period and state that to the bost of my knowledge and belief, the Owner has performed examinations and taken correct measures described in the 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 implected in the owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lose any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	•		
CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler I have inspacted the components described this Owner's Report during the period 7 to 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CERTIFICATE OF INSERVICE INSPECTION  I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Verence of IOWA and employed by Hartford Steam Boiler 181 and employed by Hartford Steam Boiler 181 to be inspected the components described this Owner's Report during the period To IOWA and state that to the bost of my knowledge and belief, the Owner has performed examinations and taken correct measures described in the 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 implection on this employer shall be liable in any manner for any personal injury or property damage or a lost any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	Certificate of Authorization No. None		Expiration Date None
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler I of Hartford, Connecticut have inspected the components described to 10 measures described in the Owner's Report of the 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 in concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Verinspectors and the State or Province of 10MA and employed by Hartford Steam Boiler 1&1 of Hartford, Connecticut have inspected the components described this Owner's Report during the period 7 for to 1/-1/2 and state that to the bost of my knowledge and belief, the Owner has performed examinations and taken correct measures described in the 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 imple concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a los any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	Signed Sumal Shoufe Owner or Owner's Designee, Title	Codes & Materials, TGL	Date, Y
Inspectors and the State or Province of IOMA and employed by Hartford Steam Boiler I of Hartford, Connecticut have inspected the components described this Owner's Report during the period 7 to 1 / / / / / / / / / / / / / / / / / /	Inspectors and the State or Province of 10MA and employed by Hartford Steam Boiler 181 of Hartford, Connecticut have inspected the components described this Owner's Report during the period 7 to 1/-/ And state that to the bost of my knowledge and belief, the Owner has performed examinations and taken correct measures described in the 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 imple concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a los any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	CERTIFICA	TE OF INSERVICE INSPECTION	
, and state that to the bost of my knowledge and belief, the Owner has performed examinations and taken correspond to the 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 in concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	, and state that to the bost of my knowledge and belief, the Owner has performed examinations and taken correct measures described in the 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 imple concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a los any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	Inspectors and the State or Province of	IOWA and empt	oyed by <u>Hartford Steam Boiler I&amp;I</u> inspacted the components described
concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neith Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a lany kind arising from or connected with this inspection.	concerning the examinations and corrective measures described in this Owner's Report. Furthermore, neither Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a los any kind arising from or connected with this inspection.  Commissions NB 8829(I)(N) 941-IA	this Owner's Report during the period	belief, the Owner has perfor	med examinations and taken correct
		concerning the examinations and corrective measure.  Inspector nor his employer shall be liable in an	ures described in this Owne ny manner for any personal i	r's Report. Furthermore, neither
	Inspectors Signature National Board, State, Province, and Endorses	Scott Prestor	Commissions_NB_8829(I)()	N) 941-IA

	Owner <u>Iowa Elec</u>	tric Light and Po Name	wer	·	Date <u>Nov</u>	ember 14	. 1990	
	P.O.Box 351, Co	edar Rapids, IA 5			Sheet 1 of	2		
		Address						
	Plant Duane Arm	old Energy Center Name			Unit1			
					202 441	·		
	32// DAEC Rd. Address	Palo, IA 52324		<del>.</del>	DCP-14	/6 Repair (	Organization P.O.	No. Job No.
						•	-	•
	Work Performed	oy <u>General Electr</u> Name	ic Co.		Type Code Symbol	Stamp	None	<del></del>
					Authorization No.		None	
	2311 W. 22nd S	T., Oak Brook IL. Address			Expiration Date	-	None	
	Identification of	of System <u>Main</u>	Steam 'A' (cl	ass 1)				
	Case (b)Applicable Ed		XI Utilized f		Edition,N/			Coc
	Identification of	of Components Rep	aired or R <b>ep</b> la	ced and Repl	lacement Component	S		
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
isc-p	iston assembly	General Elect.	215585-12	N/A	cv-4413	1990	Replacement	No
is <b>c</b>		General Elect.	6062065-63	N/A	CV-4413	1985	Replaced	No
ston	<del> </del>	General Elect.	6062065-55	N/A	CV-4413	1985	Replaced	No
em D	isc	General Elect.	214856-20	N/A	cv-4413	1990	Replacement	No
onnet		General Elect.	214856-10	N/A	CV-4413	1990	Replacement	No
nnet	<del></del>	General Elect.	N/A	N/A	CV-4413	1971	Replaced	No
cem\s	tem disc assemb.	General Elect.	6062065-30	N/A	CV-4413	1988	Replaced	No
	onal Guide Pads	General Elect.	N/A	N/A	cv-4413	1990	Repaired	No
tuds	(lea)		RI-VB23-C195	N/A	CV-4413		Replacement	No
	Description of W	lork <u>The bonnet, c</u> added under D	disc-piston, a	nd stem disc	for CV-4413 were	replace	d and additional	quide ribs we
	Tests Conducted:			matic	Nominal (	Operatin	g Pressure	<b>₽</b>
		Other	Pressure	1026	psi TestTem	p	206°F	
	in.,(2)informati	al sheets in form on in items 1 thr eets is recorded	ough 6 on thi:	s report is	rawings may be us included on each	ed, prov sh <del>ee</del> t, a	ided (1) size is nd (3) each sheet	8½ in. x 11 is numbered

11-17 70



needed to be r	eplaced during re-assembly. A	VT-1 (90-248) and VT-3	(90-249) examinatio	ns were performed ar
accepted. A VI	-2 (89-13) was completed and ac	cepted after re-assembl	у.	
		CERTIFICATE OF COMPLIAN	CE	
	ify that the statements made in	the report are correct	and this <u>replace</u>	nent co
to the rules	of the ASME Code, Section XI.		repair	or replacement
Type Co	de Symbol Stamp <u>None</u>			
1,,50 00.				
Certific	cate of Authorization NoNo	one		Expiration Date No
	C , OC .	_		1:
Signed _	Sumula Sharry Owner or Owner's Designee, Titl	Codes & Mater	ials, TGL Date	1-16-
	Owner or Owner's Designee, 1180	.e		
	CERTII	FICATE OF INSERVICE INS	PECTION	
I the under	rsigned, holding a valid commis			often and Bereine
Inspectors ar	nd the State or Province of	IOWA	and employed by Har	tford Steam Boiler I
this Owner's	Report during the pariod	7 3 70	have inspected to	he components descri
, and state t measures desc	Report during the pariod hat to the best of my knowledge cribed in the Owner's Report in	and bolief, the Owner h	as performed examina quirements of the AS	tions and taken corr SME Code, Section XI
By signing	this certificate neither the I	Inspector nor his emplo	yer makes any warra	nty, expressed or im
concerning the Inspector nor	ne examinations and corrective m r his employer shall be liable i sing from or copnected with this	measures described in t n any manner for any pe	his Owner's Report.	Furthermore, neith
1.1	プイング カー			
Insp	ectors Signature	Commissions NB   Nati	onal Board, State,	Province, and Endors
l .			•	

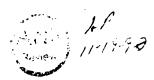
	P.O.Box 351, C	Name						
					Sheet 1 of	2		
		Address	i					
	Plant <u>Duane Arn</u>	old Energy Center Name	· -		Unit 1		· · · · · · · · · · · · · · · · · · ·	·
	3277 DAEC PA	Palo, IA 52324			DCP-14	74		•
	Address			<del></del>	0CP-14		Organization P.O.	No. Job No.
	Work Performed	by <u>Gen</u> eral Electr	ic Co.		Type Code Symbol			
		Name						
			•		Authorization No	•	None	
	2311 W. 22nd S	T., Oak Brook IL.	60521		Expiration Date		None	•
		Address		<del></del>				
	Identification	of System <u>Main</u>	Steam 'B' (ci	ás <b>s</b> 1)				
				<del></del>				
	(a)Applicable C	onst. Code <u>*ANSI</u>	B31.1	19 <u>67</u>	Edition,N	I/A	_Addenda, <u>N/A</u>	Co
	Case				or Replacements 19			
		Spec. 21A9230 Rev		or kepairs o	or <b>kep</b> tacements 19	OU WOI	<del>_</del>	
			-id 0t-					
	Idomeidianeian .				SCOMONT CAMPANANT			
	Identification (	of Components Rep	arred or kepta	ced and kepi	decirent component	.5		
)	Name of Component	Name of Manufacture	Manufacturer Serial No.	National	Other Identification	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
sc-ni	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
	Name of	Name of	Manufacturer Serial No. 215585-11	National Board No.	Other Identification CV-4415	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
sc	Name of Component	Name of Manufacture General Elect.	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
sc ston	Name of Component ston assembly	Name of Manufacture General Elect. General Elect.	Manufacturer Serial No. 215585-11 6053657-123	National Board No. N/A	Other Identification CV-4415	Year Built 1990	Replaced, or Replacement Replacement Replaced	Code Stamped (Yes or No) No
sc ston em Di nnet	Name of Component ston assembly	Name of Manufacture  General Elect. General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-11 6053657-123 6062065-53 214856-22 214856-11	National Board No. N/A N/A N/A	Other Identification CV-4415 CV-4415 CV-4415 CV-4415	Year Built 1990 1988 1985	Replaced, or Replacement Replacement Replaced Replaced	Code Stamped (Yes or No) No No
sc ston em Di nnet nnet	Name of Component iston assembly	Name of Manufacture  General Elect. General Elect. General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-11 6053657-123 6062065-53 214856-22 214856-11 N/A	National Board No. N/A N/A N/A N/A	Other Identification CV-4415 CV-4415 CV-4415 CV-4415 CV-4415	Year Built 1990 1988 1985 1990 1990	Replaced, or Replacement Replaced Replaced Replaced Replaced Replacement Replacement	Code Stamped (Yes or No)  No No No No No
sc ston em Di nnet nnet em\st	Name of Component ston assembly	Name of Manufacture  General Elect. General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-11 6053657-123 6062065-53 214856-22 214856-11	National Board No. N/A N/A N/A	Other Identification CV-4415 CV-4415 CV-4415 CV-4415	Year Built 1990 1988 1985 1990	Replaced, or Replacement Replaced Replaced Replaced Replaced Replaced	Code Stamped (Yes or No)  No No No No

11-19-92

were replaced. Additionally, four guide pads were				
<u>oody bese metal repair was performed (ref. NCR 90</u>	-062) and accepted	±(VT-3 90-326).	A VT-1(90-250) and VI	r-3(90-251
was performed and accepted. A VT-2(89-13) was als	o performed and ad	cepted after re	-assembly.	····
CERT	IFICATE OF COMPLIA	WCE		
We certify that the statements made in the	report are correc	t and this <u>rer</u>	olacement	_ conforms
to the rules of the ASME Code, Section XI.	·		epair or replacement	<del></del>
Type Code Symbol Stamp None	•			
, type does cymest dramp				
Certificate of Authorization No. None			Expiration Date	None_
Signed Summer's Designee, Title			11	_
Signed Structure Structure Programme Title	Codes & Mate	rials, TGL Da	te	
Owner or Owner's Designee, Title				
CEDITEICA	TE OF INSERVICE IN	ISPECT ION		
I, the undersigned, holding a valid commission Inspectors and the State or Province of	IOWA	and employed b	y <u>Hartford Steam Boil</u>	er I&I Co
of Hartford, Connecticut this Owner's Report during the period		have inspec	ted the components de	escribed i
, and state that to the best of my knowledge and	belief, the Owner	has performed ex	kaminations and taken	
measures described in the Owner's Report in acco	ordance with the r	equirements of	the ASME Code, Section	n'XI.
By signing this certificate neither the Insp				
concerning the examinations and corrective measure. Inspector nor his employer shall be liable in an				
any kind arising from or connected with this ins		, , , ,		
1 <del>7</del> 7 /: /	Commissions NE	8829(I)(N) 941	-1A	
ALAND SOUNDED	— <del></del>	tional Board, St	ate, Province, and Er	ndorsemen
Inspectors Signature	Na <sup>-</sup>			
Inspectors Signature  Date 1200 1950	Na			

		Neme	wer						
_P.O.E	30x 351, Cec	dar Rapids, IA 5			Sheet <u>1 of</u>	2			
		Address							
. Plant_	Duane Arno	ld Energy Center			Unit 1				
		Name			-				
3277	DAEC Rd. F	Palo, IA 52324			DCP-14	76			
	Address				Repair Organization P.O.No., Job No.				
Work P	arformed by	. Cemeral Electo	ic Co		Type Code Symbol	C4	Nama		
WOLK	er formed by	Nema	7C CO.		Type code symbol	stamp	None		
					Authorization No	•	None -		
2311	W. 22nd ST.	. Oak Brook IL.	60521	· _	Expiration Date		None		
	•	Address							
. Identi	fication of	f Systam <u>Main</u>	Steam 'B' (cl	ass 1)					
				<del></del>				***	
(a)App	dicable Cor	net Code #ANSI	21 1	10 67	Edition,N/	/A	Addondo 11/A	С	
Case	MICADIE CO	ist. code Ansi i	931.1	19 01	earcion,	^	_Addenda,N/A		
				or Repairs (	or Repl <mark>acements 1</mark> 9	80 W81			
*Base	Code - GE S	pec. 21A9230 Rev	·. 2.						
Identi	fication of	Components Rep	nired or Repla	ced and Rep	lacement Component	:s			
				<b>-</b>		-			
						<u> </u>		T	
				National			Renaired	ASME Code	
Name (	of	Name of	Manufacturer	National Board	Other	Year	Repaired Replaced,	ASME Code Stamped	
Name (		Name of Manufacture	Manufacturer Serial No.		Other Identification	Year Built		Code Stamped (Yes	
				Board			Replaced,	Code Stamped	
				Board			Replaced,	Code Stamped (Yes	
Compone	ent	Manufacture	Serial No.	Board No.	Identification	Built	Replaced, or Replacement	Code Stamped (Yes or No)	
Components of the Components o	ent ssembly			Board	Identification	Built 1990	Replaced, or Replacement	Code Stamped (Yes or No)	
Components of the Components o	ent ssembly	Manufacture General Elect.	Serial No. 215585-5	Board No.	Identification	Built	Replaced, or Replacement	Code Stamped (Yes or No)	
isc-piston as	ent ssembly	Manufacture  General Elect. General Elect. General Elect.	Serial No. 215585-5 6062065-61 6062065-51	No.  N/A  N/A  N/A	CV-4416 CV-4416 CV-4416	1990 1985 1985	Replaced, or Replacement  Replacament  Replaced  Replaced	Code Stamped (Yes or No) No No	
isc-piston as	ent ssembly	Manufacture  General Elect.  General Elect.	Serial No. 215585-5 6062065-61	No.	Identification  CV-4416  CV-4416	1990 1985	Replaced, or Replacement Replacement Replaced	Code Stamped (Yes or No)	
Components of the Disconnet	ent ssembly	General Elect. General Elect. General Elect. General Elect. General Elect.	215585-5 6062065-61 6062065-51 214856-19	N/A N/A N/A N/A	CV-4416 CV-4416 CV-4416 CV-4416 CV-4416	1990 1985 1985	Replaced, or Replacement  Replacament  Replaced  Replaced	Code Stamped (Yes or No) No No	
components: isc-piston as isc iston item Disc onnet onnet	ssembly	General Elect. General Elect. General Elect. General Elect. General Elect. General Elect.	215585-5 6062065-61 6062065-51 214856-19 214856-14	N/A N/A N/A N/A N/A	CV-4416 CV-4416 CV-4416 CV-4416 CV-4416	1990 1985 1985 1990 1990	Replaced, or Replacement  Replacement  Replaced  Replaced  Replacement  Replacement  Replacement	Code Stamped (Yes or No)  No No No No No	
Component Component Connett Connect Co	ssembly	General Elect. General Elect. General Elect. General Elect. General Elect.	215585-5 6062065-61 6062065-51 214856-19	N/A N/A N/A N/A	CV-4416 CV-4416 CV-4416 CV-4416 CV-4416	1990 1985 1985 1990	Replaced, or Replacement  Replacement  Replaced  Replaced  Replaced  Replaced	Code Stamped (Yes or No)  No No No No	
isc-piston as isc iston  tem Disc onnet onnet tem\stem disc dditional Gui	ent ssembly c assemb.	General Elect. General Elect. General Elect. General Elect. General Elect. General Elect.	215585-5 6062065-61 6062065-51 214856-19 214856-14 N/A 6062065-29	NO.  N/A N/A N/A N/A N/A N/A N/A N/A N/A N/	CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416	1990 1985 1985 1990 1990	Replaced, or Replacement  Replacement  Replaced  Replaced  Replacement  Replacement  Replacement	Code Stamped (Yes or No)  No No No No No	
isc-piston as isc iston tem Disc onnet onnet tem\stem disc dditional Gutuds (4ea)	ssembly c assemb.	General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect.	215585-5 6082085-61 6082085-51 214856-19 214856-14 M/A 6082065-29 N/A RI-VB23-C195	NO.  N/A N/A N/A N/A N/A N/A N/A N/A N/A N/	CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416	1990 1985 1985 1990 1990 1971 1985	Replaced, or Replacement  Replaced Replaced Replaced Replaced Replaced Replaced Replaced Replaced Replaced Replaced	Code Stamped (Yes or No)  No No No No No No No No No No No No	
Component Disc piston as Disc piston Stem Disc piston Connet Connec Conn	ssembly c assemb.	General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. Castle Metals	215585-5 6062065-61 6062065-51 214856-19 214856-14 N/A 6062065-29 N/A RI-VB23-C195 HT#IN85326	N/A N/A N/A N/A N/A N/A N/A N/A N/A	CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416	1990 1985 1985 1990 1971 1990 1971 1985	Replaced, or Replacement  Replacement  Replaced  Replaced  Replacement  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced	Code Stamped (Yes or No)  No No No No No No No No No No No No	
Component Stem Disc Stem Disc Stem Disc Stem Stem disc Stem Stem disc Stem Stem Stem Stem Stem Stem Stem Stem	ssembly c assemb.	General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. Castle Metals	215585-5 6062065-61 6062065-51 214856-19 214856-14 N/A 6062065-29 N/A RI-VB23-C195 HT#IN85326	N/A N/A N/A N/A N/A N/A N/A N/A N/A	CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416	1990 1985 1985 1990 1971 1990 1971 1985	Replaced, or Replacement  Replacement  Replaced  Replaced  Replacement  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced	Code Stamped (Yes or No)  No No No No No No No No No No No No	
components cisc-piston as a sisc ciston ctem Disc connet connet tem\stem disc dditional Guittuds (4ea) uts (1ea) Descri	ssembly  c assemb.  ide Pads  ption of Wo	General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. Castie Metals ork The bonnet, of added under D	215585-5 6062065-61 6062065-51 214856-19 214856-14 N/A 6062065-29 N/A RI-VB23-C195 HT#IN85326 disc-piston, ar	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416	1990 1985 1985 1990 1971 1985 1990	Replaced, or Replacement  Replacement  Replaced  Replaced  Replacement  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replacement  Replacement  Replacement  Replacement  Replacement  Replacement  Replacement	Code Stamped (Yes or No)  No No No No No No No No No No No No	
Component stem Disc stem Disc stem Disc stem d	ssembly  c assemb.  ide Pads  ption of Wo	General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect.	215585-5 6062065-61 6062065-51 214856-19 214856-14 N/A 6062065-29 N/A RI-VB23-C195 HT#IN85326	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416	1990 1985 1985 1990 1971 1985 1990	Replaced, or Replacement  Replacement  Replaced  Replaced  Replacement  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced	Code Stamped (Yes or No)  No No No No No No No No No No No No	
Component Disc piston as Disc piston Stem Disc Bonnet Bonnet bitem\stem disc dditional Guittuds (4ea) Buts (1ea) Descri	ssembly  c assemb.  ide Pads  ption of Wo	General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. Castie Metals ork The bonnet, of added under D	215585-5 6062065-61 6062065-51 214856-19 214856-14 N/A 6062065-29 N/A RI-VB23-C195 HT#IN85326 disc-piston, ar	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416 CV-4416	1990 1985 1985 1990 1990 1971 1985 1990 replace	Replaced, or Replacement  Replacement  Replaced  Replaced  Replacement  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replaced  Replacement  Replacement  Replacement  Replacement  Replacement  Replacement  Replacement  Replacement  Replacement  Replacement	Code Stamped (Yes or No)  No No No No No No No No No No No No No	

NOTE: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8½ 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.



### FORM NIS-2 (Back) sheet 2 of 2

(4ea) and Nuts (1ea) wer	e required to be replaced	during re-assembly. A VT-	1(90-252) and VT-3(90-253) exami
was performed and accept	ted. A VT-2(89-13) was comp	leted and accepted after	re-assembly.
<del>-</del>	CERTII	FICATE OF COMPLIANCE	
We certify that t to the rules of the AS	he statements made in the r ME Code, Section XI.	report are correct and the	replacement co
Type Code Symbol	Stamp None		
	thorization No. <u>None</u>		Expiration Date No
Signed Suner or	Owner's Designee, Title	Codes & Materials, T	GL_ Date
	CERTIFICATE	E OF INSERVICE INSPECTION	
Inspectors and the Sta	te or Province of	IOWA and amo	Board of Boiler and Pressure bloyed by <u>Hartford Steam Boiler I</u> inspected the components descrito // // / / / / / / / / / / / / / / / /
	best of my knowledge and be the Owner's Report in accor	elief, the Owner has perfo dance with the requiremen	ormed examinations and taken corr nts of the ASME Code, Section XI
measures described in			
By signing this cer concerning the examina Inspector nor his empl any kind arising from	tions and corrective measur oyer shall be liable in any or connected with this insp	res described in this Own manner for any personal pection.	es any warranty, expressed or imer's Repert. Furthermore, neith injury or property damage or a total (N) 941-IA pard, State, Province, and Endors

	P.O.Box 351, Co	Nema					990		
	Diane Buene Arms	edar Rapids, IA 5	2406		Sheet <u>1 of</u>	2			
	Diana Buana Anni	Address			,				
-	Plant_Duane_Arm	old Energy Center			Unit 1	<del></del>			
•			•		222 441	<b>-</b> ,			
	3277 DAEC Rd. Address	Palo, IA 52324			DCP-14		Organization P.O.	NoJob No	<u>-</u>
					Time Gode State	-	-	•	
,	Work Performed t	Name	1C CO.	_	Type Code Symbol Stamp None				
					Authorization No	•	None		
•	2311 W. 22nd ST	T., Oak Brook IL. Address			Expiration Date		None		
:	Identification (	of System <u>Main</u>	Steam 'C' (cl	ass 1)					
	(a)Applicable Co	onst. Code *ANSI	831.1	19 <u>_67</u>	Edition,N	<u>'A</u>	_Addenda,N/A		_cod
	(b)Applicable Ed	dition of Section Spec. 21A9230 Rev		or Repairs (	or Replacements 19	2 <u>80 W81</u>	· ·		
· .	Identification o	of Components Rep	aired or Repla	ced and Rep	lacement Component	:s			
	Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Repoired Replaced, or Replacament	ASME Code Stamped (Yes or No)	
				Board			Replaced,	Code Stamped (Yes	
sc-pis	Component	Manufacture General Elect. General Elect.	Serial No. 215585-9 6062065-57	Board No. N/A	Identification CV-4418	Built 1990 1985	Replaced, or Replacament Replacement Replaced	Code Stamped (Yes or No) No	
sc-pis	Component	Manufacture General Elect.	Serial No. 215585-9	Board No.	Identification	Built 1990	Replaced, or Replacament Replacement	Code Stamped (Yes or No)	
	Component ston assembly	Manufacture General Elect. General Elect.	Serial No. 215585-9 6062065-57	Board No. N/A	Identification CV-4418	Built 1990 1985	Replaced, or Replacament Replacement Replaced	Code Stamped (Yes or No) No	
sc-pis sc ston em Dis	Component ston assembly	Manufacture  General Elect.  General Elect.  General Elect.	215585-9 6062065-57 6062065-52	No.  N/A  N/A  N/A	Identification CV-4418 CV-4418 CV-4418	1990 1985 1985	Replaced, or Replacament  Replacement  Replaced  Replaced	Code Stamped (Yes or No) No	
sc-pis sc ston em Dis	ston assembly	General Elect. General Elect. General Elect. General Elect. General Elect. General Elect.	215585-9 6062065-57 6062065-52 214856-23 214856-16 N/A	N/A N/A N/A N/A N/A	CV-4418 CV-4418 CV-4418 CV-4418 CV-4418	1990 1985 1985 1980 1990	Replaced, or Replacement  Replacement  Replaced  Replaced  Replaced  Replacement  Replacement  Replacement	Code Stamped (Yes or No)  No No No No No	
sc-pis sc ston em Dis nnet nnet em\ste	Component ston assembly	General Elect. General Elect. General Elect. General Elect. General Elect.	215585-9 6062065-57 6062065-52 214856-23 214856-16	N/A N/A N/A N/A	CV-4418 CV-4418 CV-4418 CV-4418	1990 1985 1985 1990	Replaced, or Replacement  Replacement  Replaced  Replaced  Replaced  Replaced	Code Stamped (Yes or No)  No No No No	



90-254) and	VT-3 (90-255) was per	formed and accept	ed. A VT-2 (89	-13) examinat	ion was p	erformed and ac	cept
e-assembly.				· · · · · · · · · · · · · · · · · · ·			
		CERTIF	ICATE OF COMPLIA	ANCE			
We ceri	tify that the statemer	nts made in the re	port are correc	t and this _	replaceme	nt	cor
	s of the ASME Code, Se		•	_	repair o	r replacement	
Type Co	ode Symbol Stamp	None					
0	icate of Authorization	n No N <del>one</del>			1	expiration Date	. Nor
		_	<del> </del>		•		
Signed	Sumber	Shaupa	Codes & Mate	erials, TGL	Date	11-16-	1
, o : <b>3</b> o a	Owner or Owner's Des	signee, Title)					
		CERTIFICATE	OF IMSERVICE I	NSPECT10N			
I, the unde	ersigned, holding a v	valid commission	issued by the	National Boa	ird of Bo	ler and Press	ure \
Inspectors of	and the State or Provi	Connecticut		have ins	pected the	e components de	<u>er 18</u> scrib
this Owner's	s Report during the po that to the best of my	eriod	7-7-7-7	has performe	d eveninat	ions and taken	COFFE
measures des	scribed in the Owner's	s Report in accord	dance with the	requirements	of the ASP	E Code, Section	n XI.
By signir	ng this certificate no	either the Inspec	tor nor his emb	loyer makes a	ny warran	ty, expressed o	e imp
concerning	the examinations and or his employer shall	corrective measure	es described in	this Owner's	Report.	Furthermore, r	ne i the
any kind ar	ising from or connects	ed with this inspe	ection.	personal my	21 <b>7</b> 01 <b>p</b> 10	per ty damage or	•
b	with the	11/11/	Commissions N	B 8829(I)(N)	941-IA		
Ins	pectors Signature		Na	tional Board	, State, P	rovince, and Er	dorse
	May 17 19	-1 -					

Duane Arno DAEC Rd. I Address Performed by	Name .,Oak Brook IL. Address	ic Co.	,	Type Code Symbol Authorization No.	76 Repair ( Stamp	Organization P.O.N None	do.,Job No.
DAEC Rd. I Address Performed by W. 22nd ST	ld Energy Center Nema  Palo, IA 52324  y General Electri Name  .,Oak Brook IL. Address	ic Co.		Type Code Symbol Authorization No.	Repair (	None	ło., Job No.
DAEC Rd. I Address Performed by W. 22nd ST	Nema Palo, IA 52324  y General Electri Name .,Oak Brook IL. Address	ic Co.		Type Code Symbol Authorization No.	Repair (	None	lo.,Job No.
Address Performed by W. 22nd ST	Palo, IA 52324  y General Electri Name  .,Oak Brook IL. Address	ic Co.		Type Code Symbol Authorization No.	Repair (	None	lo.,Job No.
Address Performed by W. 22nd ST	y <u>General Electr</u> Name .,Oak Brook IL. Address	ic Co.		Type Code Symbol Authorization No.	Repair (	None	lo.,Job No.
Performed by	Name .,Oak Brook IL. Address	ic Co.		Type Code Symbol Authorization No.	Stamp	None	lo.,Job No.
W. 22nd ST	Name .,Oak Brook IL. Address	60521		Authorization No.			
	. ,Oak Brook IL. Address				•	Nona	
	Address					NOTIG	
	Address						
	Address			Expiration Date _		None	
ification of				expride on bate		NOTIC	
i i regeron o	f System Main	Steam ICI (cl	ace 1)				
	- зузсені <u>- натт</u>	Steam o tota	434 17				
olicable Cor	net Code #ANSI I	a <b>31 1</b>	19 67	Edition N	/∆	Addende N/A	Cox
	<u>,                                      </u>						
olicable Edi	ition of Section	XI Utilized fo	or Repairs o	or Replacements 19	80 W81	-	
code - de s	pec. ZINYZJU KEV						
ification of	f Components Repa	aired or Reple	ced and Repl	lacement Component	S		
	1	T					
!		1	Netional			Dame i need	ASME Code
of	Name of	Manufacturer		Other	Year	Replaced,	Stamped
ent	Manufacture	Serial No.	No.	Identification	Built	or Replacament	(Yes
		İ					or No)
ssembly	General Elect.	215585-8	N/A	cv-4419	1990	Replacement	No
	General Elect.	6062065-59	N/A	CV-4419	1985	Replaced	No
	General Elect.	6062065-49	N/A	CV-4419	1985	Replaced	No
	General Elect.	214856-18	N/A	cv-4419	1990	Replacement	No
	Consol Floor	24/954 17	N / A	CV //10	1000		l
		N/A					No
c assemb.	General Elect,	6062065-28	N/A	CV-4419	1985	Replaced	No
				1		1	,
ide Pads	General Elect.	N/A	N/A	CV-4419	1990	Repaired	No
	plicable Edi Code - GE S ification of of nent	of Name of Manufacture  assembly General Elect. General Elect. General Elect. General Elect. General Elect. General Elect. General Elect.	plicable Edition of Section XI Utilized for Code - GE Spec. 21A9230 Rev. 2.  iffication of Components Repaired or Replex of Manufacturer Serial No.  assembly General Elect. 215585-8 General Elect. 6062065-59 General Elect. 6062065-49  General Elect. 214856-18 General Elect. N/A	plicable Edition of Section XI Utilized for Repairs of Code - GE Spec. 21A9230 Rev. 2.  iffication of Components Repaired or Repleced and Repleced a	plicable Edition of Section XI Utilized for Repairs or Replacements 19 Code - GE Spec. 21A9230 Rev. 2.  iffication of Components Repaired or Repleced and Replacement Component  of Name of Manufacturer Board Other nent Manufacture Serial No. No. Identification  assembly General Elect. 215585-8 N/A CV-4419 General Elect. 6062065-59 N/A CV-4419 General Elect. 214856-18 N/A CV-4419 General Elect. 214856-13 N/A CV-4419 General Elect. N/A N/A CV-4419 General Elect. N/A N/A CV-4419	plicable Edition of Section XI Utilized for Repairs or Replacements 1980 W81  Code - GE Spec. 21A9230 Rev. 2.  iffication of Components Repaired or Repleced and Replacement Components  Of Mame of Manufacturer Serial No.  National Board Other Year Identification Built  assembly General Elect. 215585-8 N/A CV-4419 1985  General Elect. 6062065-59 N/A CV-4419 1985  General Elect. 6062065-49 N/A CV-4419 1985  General Elect. 214856-18 N/A CV-4419 1990  General Elect. 214856-13 N/A CV-4419 1990  General Elect. N/A N/A CV-4419 1990  General Elect. N/A N/A CV-4419 1990  General Elect. N/A N/A CV-4419 1990	Name of Manufacturer Serial No. No. Other Identification Built Replaced, or Replacement General Elect. 215585-8 N/A CV-4419 1985 Replaced General Elect. 6062065-59 N/A CV-4419 1985 Replaced General Elect. 6062065-49 N/A CV-4419 1985 Replaced General Elect. 214856-18 N/A CV-4419 1990 Replacement General Elect. 214856-18 N/A CV-4419 1990 Replacement General Elect. N/A N/A CV-4419 1990 Replacement General Elect. N/A N/A CV-4419 1990 Replacement General Elect. N/A N/A CV-4419 1990 Replacement General Elect. N/A N/A CV-4419 1990 Replacement General Elect. N/A N/A CV-4419 1990 Replacement General Elect. N/A N/A CV-4419 1991 Replaced



		to assist in centering the disc. A v
ody repair was performed (ref. NCR 90-045) and		
as performed and accepted. A VT-2(89-13) was	also conducted and accepted a	after re-assembly.
CE	RTIFICATE OF COMPLIANCE	····
We certify that the statements made in to the rules of the ASME Code, Section XI.	he report are correct and this	s <u>replacement</u> confor repair or replacement
Type Code Symbol Stamp None		
Certificate of Authorization No. <u>Non</u>	,	Expiration Date <u>None</u>
Signed Sumber Share Owner or Owner's Designee, Title	Codes & Materials, TG	SL Date
CERTIFI	CATE OF INSERVICE INSPECTION	
I, the undersigned, holding a valid commiss Inspectors and the State or Province of of hartford, Connecticut	IOWA and empl have	oyed by <u>Hartford Steam Boiler I&amp;I C</u> inspected the components described
this Owner's Report during the period, and state that to the best of my knowledge ar measures described in the Owner's Report in a	nd belief, the Owner has perfor	
By signing this certificate neither the In concerning the examinations and corrective me. Inspector nor his employer shall be liable in	asures described in this Owne any manner for any personal i	r's Report. Furthermore, neither t
any kind arising from or connected with this	inspection.	

•	Owner Iowa Elec	tric Light and Po	wer		Date Nove	mber 14	1990	
•		Name						
	P.O.Box 351, Co	edar Rapids, IA 5			Sheet <u>1 of</u>	2		
		Address			~			
	Plant Duane Arm	old Energy Center			Unit 1			
		Name						
		Palo. IA 52324			DCP-14	76		
	Address					Repair	Organization P.O.	No.,Job No.
	Work Performed !		ic Co.		Type Code Symbol	Stamp_	Nona	
		Name			Authorization No	_	None	
					(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•	None	
	2311 W. 22nd S1	T. Oak Brook IL.	60521		Expiration Date		None .	
		Address		<del></del>	expiración bace .		NOTE:	
	Idontification	of System - Main	Stoom IDI (cl	aca 1)				
	transfer to the state of the st	of System <u>Main</u>	steam b (ct	453 1)			·	<del></del>
	(a) Ammilian black		074 4	10 (7	fairin u		A 44	_
	Case	onst. Code -ANSI_	531.1	19_0/	Edition,N	^	Addenda,N/A	Co
	(b)Applicable Ed	dition of Section	XI Utilized f	or Repairs	or Replacements 19	80 W81		
	*Base Code - GE	Spec. 21A9230 Rev	v. 2.					
	Identification of	of Components Rep	aired or Repla	ced and Rep	lacement Component	:s		
	· · · · · · · · · · · · · · · · · · ·					T		
				National			Repaired	ASME Code
	Name of .	Name of	Manufacturer	Board	Other	Year	Replaced,	Stamped
	Component	Manufacture	Serial No.	No.	Identification	Built	or Replacement	(Yes or No)
							·	J 51 11.07
ec-ni	ston assembly	General Elect.	215585-7	N/A	cv-4420	1990	Book source	, , , , , , , , , , , , , , , , , , ,
sc pi	3 COTT BS S CHIDLY	General Elect.	6053657-124	N/A	CV-4420	1988	Replacement Replaced	No No
ston		General Elect.	6053657-127	N/A	CV-4420	1988	Replaced	No
em Dí	sc	General Elect.	214856-24	N/A	cv-4420	1990	Replacement	No
		Company Class	21/05/ 45	11.44			<u> </u>	
nnet		General Elect.	214856-15 N/A	N/A N/A	CV-4420 CV-4420	1990	Replacement Replaced	No
	em disc ass <b>emb.</b>	General Elect.	6062065-27	N/A	CV-4420	1985	Replaced	No
ditio	nal Guide Pads	General Elect.	N/A	N/A	CV-4420	1990	Repaired	No
		70			104 4450	1770	Kepa i red	INO
	Description of U	lark The bennet	dina sistem s		- f mi ((20			
	Pesci iperon of W	added under D	CP-1476	N Stem OISC	for CV-4420 were	replace	ed and additional	guide ribs we
	Tests Conducted:	Hwdroetetia		natio	<b></b>	<b>.</b>	_ &	
	reats conducted:	nyurustatit	Pneus	NE CIC	Nominal	uperatin	g Pressure	×
		Oabaa 🖂	Pressure	1026	psi Test Ten	ю.	206 °F	
		Other					- 200	
		Other						
	NOTE: Supplement	سا al sheets in form:	n of lists. sk	etches, or d	drawings may be us included on each	ed prov	vided (1) size is	81/2 in x 11



oody repair was performed (ref. NCR 90-0	pads were welded on the valve body  (63) and accepted (VT-3 90-327). A V	
was performed and accepted. A VT-2(89-1	_ :	
- <del> </del>	CERTIFICATE OF COMPLIANCE	
	de in the report are correct and thi	
to the rules of the ASME Code, Section	XI.	repair or replacement
Type Code Symbol Stamp <u>Nona</u>		
Certificate of Authorization No.	None	Expiration Date None
	•	
signed Surunder St	Parfacodes & Materials, To	GL Date 11-16-
Owner or Owner's Designee,	, Title S	
(	CERTIFICATE OF INSERVICE INSPECTION	
I, the undersigned, holding a valid of	commission issued by the Nationel	Board of Boiler and Pressure Ve
Inspectors and the State or Province of Hartford, Connect	f IOWA and emp	loyed by <u>Hartford Steem Boiler I&amp;I</u> inspected the components describe
this Owner's Report during the period , and state that to the best of my knowl	2-2-33	to //-/9-3-2
measures described in the Owner's Repor	edge and belief, the Owner has perfort in accordance with the requirement	ormed examinations and taken correct of the ASME Code, Section XI.
By signing this certificate neither concerning the examinations and correct Inspector nor his employer shall be lia any kind arising from or connected with	tive measures described in this Owne able in any manner for any porsonal	er's Report. Furthermore, neither
Level / resell	Commissions_NB_8829(1)(	(N) 941-IA
Inspectors Signature	National Box	ard, State, Province, and Endorsem

		tric Light and Po Name	wer	<del></del>	Date <u>Novemb</u>	<u>er 14, 1</u>	,, <b>,</b>	· ·
	P.O.Box 351, Co	edar Rapids, IA 5			Sheet 1 of	2		
		Address	i				•	
	Plant Duane Arno	old Energy Center Nema			Unit 1			
	•					_,		
	3277 DAEC Rd. Address	Palo, IA 52324			DCP-14	76 Penair (	Organization P.O.	No Joh No
						•	-	
	Work Performed t	by <u>General Electr</u> Nema	ic Co.	<del></del>	Type Code Symbol	Stamp	None	<del></del>
		ri Cilia			Authorization No.	•	Nona	
	2311 W. 22nd S	T., Oak Brook IL.	60521		Expiration Date		None	
		Address						
	Identification of	of SystemMain	Steam 'D' (cl	ass 1)			,	
		•						
	(a)Applicable Co	onst. Code *ANSI	B31.1	19 <u>_67</u>	Edition,N/	<u>′A</u>	_Addenda,N/A	
	Case						<del></del>	`
				or Repairs (	or Replacements 19	80 W81	Physicade	
	*Rege Code - CE	Shor Jieuziii Dai						
	*Base Code - GE	•						
	·	•		ced and Repi	acement Component	:s		
	·	•		ced and Repl	acement Component	:s		ASME
	·	•		National	Other	Year Built	Repaired Replaced, or Replacement	ASME Code Stamped (Yes or No)
	Identification of Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes
	Identification of	Name of Manufacture	Manufacturer Serial No. 215585-10	National Board No.	Other Identification CV-4421	Year Built 1990	Replaced, or Replacement	Code Stamped (Yes or No)
1 S C	Identification of Name of Component	Name of Manufacture	Manufacturer Serial No.	National Board No.	Other Identification	Year Built	Replaced, or Replacement	Code Stamped (Yes or No)
isc iston	Identification of Name of Component	Name of Manufacture  General Elect. General Elect.	Manufacturer Serial No. 215585-10 6062065-56	National Board No. N/A N/A	Other Identification CV-4421	Year Built 1990	Replaced, or Replacement Replacement Replaced	Code Stamped (Yes or No) No
isc iston tem D	Identification of Name of Component	Name of Manufacture  General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-10 6062065-56 6062065-48	National Board No. N/A N/A N/A	Other Identification CV-4421 CV-4421 CV-4421	Year Built 1990 1985 1985	Replaced, or Replacement Replacement Replaced Replaced	Code Stamped (Yes or No) No
isc iston tem Di	Name of Component	Name of Manufacture  General Elect. General Elect. General Elect. General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-10 6062065-56 6062065-48 214856-25 214856-12 N/A	National Board No. N/A N/A N/A N/A	Other Identification  CV-4421  CV-4421  CV-4421  CV-4421  CV-4421	Year Built 1990 1985 1985 1990	Replaced, or Replacement Replaced Replaced Replaced Replacement Replacement Replacement	Code Stamped (Yes or No)  No No No No No No
isc iston tem D	Name of Component	Name of Manufacture  General Elect. General Elect. General Elect. General Elect. General Elect.	Manufacturer Serial No. 215585-10 6062065-56 6062065-48 214856-25 214856-12	National Board No. N/A N/A N/A	Other Identification  CV-4421  CV-4421  CV-4421  CV-4421	Year Built 1990 1985 1985 1990	Replaced, or Replacement Replaced Replaced Replaced Replaced Replacement	Code Stamped (Yes or No)  No No No No

ANIA 11-19-92

(90	260) and VT-3 (90-261) was performed and accepted. A VT-2 (89-13) was conducted and accepted after	re-
	CERTIFICATE OF COMPLIANCE	
-to	We certify that the statements mode in the report are correct and this replacement the rules of the ASME Code, Section XI.	. c
	Type Code Symbol Stamp <u>None</u>	
	Certificate of Authorization No. None Expiration Date	No
	Signed Surular Sharps Codes & Materials, TGL Date 11-16 - Owner or Owner's Designee, Title	_,
	CERTIFICATE OF INSERVICE INSPECTION	
In	the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure pectors and the State or Province of and employed by <u>Hartford Steam Boile</u> of have inspected the components des	r I
th me	s Owner's Report during the period to to to nd state that to the best of my knowledge and belief, the Owner has performed examinations and taken casures described in the Owner's Report in accordance with the requirements of the ASME Code, Section	orr
Ir	By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or accerning the examinations and corrective measures described in this Owner's Report. Furthermore, nespector nor his employer shall be liable in any manner for any personal injury or property damage or kind arising from or connected with this inspection.	i th
	A-11 (01-11) Commissions NB 8829(1)(N) 941-1A	
_	Inspectors Signature Commissions NB 8829(I)(N) 941-IA  National Board, State, Province, and End	ors
	e Nov 19 19 90	

Part H, Page 1 of 1

1) Owners: Iowa Electric Light and Power Company P.O. Box 351

Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Marion, Iowa

Corn Belt Power Cooperative

Humboldt, Iowa

- 2) Plant <u>Duane Arnold Energy Center, Palo, Iowa 52324</u>
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

#### Abstract of Conditions Noted and Corrective Measurers Taken:

The corrective measures addressed in this report were performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 1980 Edition through Winter 1981 Addenda, and the Duane Arnold Energy Center Updated Final Safety Analysis Report. The corrective sures performed as Repairs or Replacements are listed in Part F of this ort and are documented, using form NIS-2, in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 1980 Edition through Winter 1982 Addenda. Specific details and associated records of additional corrective measures are on file at Iowa Electric Light and Power Company. The corrective measures addressed were performed during the period of December 28, 1988 through September 10, 1990.

## INSERVICE INSPECTION REPORT December 28, 1988 through September 10,1990

1) Owners: Iowa Electric Light and Power Company P.O. Box 351 Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Marion, Iowa

Corn Belt Power Cooperative

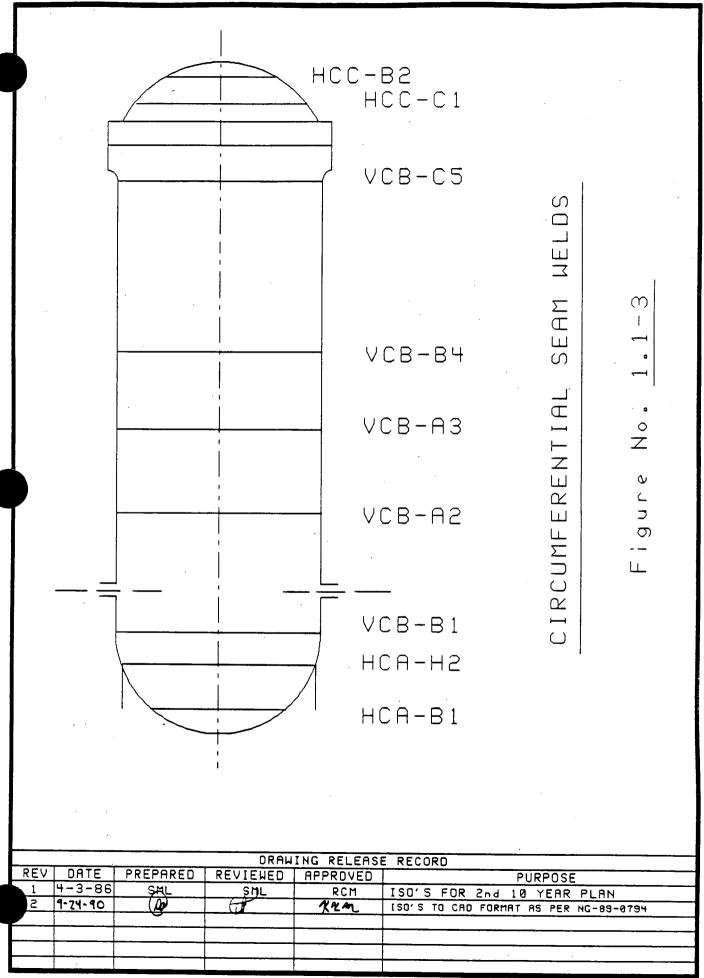
Humboldt, Iowa

- 2) Plant Duane Arnold Energy Center, Palo, Iowa 52324
- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required)  $\underline{N/A}$
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

#### ISI FIGURES AND ISOMETERICS

PLEASE NOTE: ISI Figures & Isometrics is listed in Part B of this report



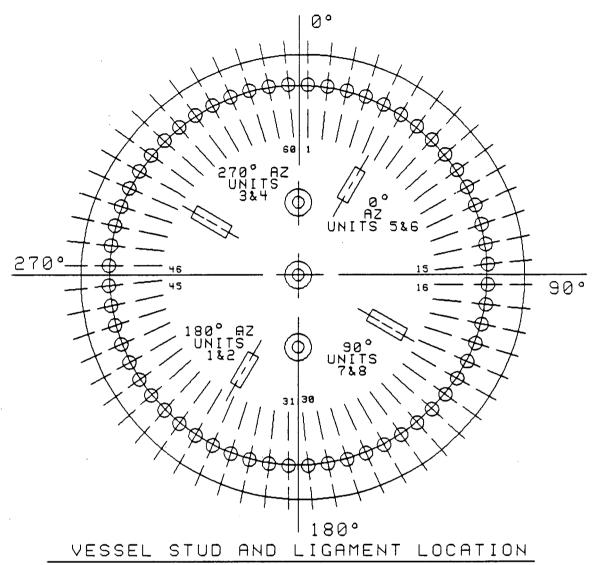


Figure No. <u>1.1-5</u>

essure Retaining Studs Bushings Washers Ligaments

			DRAW	ING RELEASI	SE RECORD			
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE			
1	4-3-86	Sัมั่า	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN			
2	9-24-40		(zd	122m	ISO'S TO CAD FORMAT AS PER NG-89-0794			
-		)						

INSERVICE INSPECTION ASHE SECTION XI ISOMETRIC

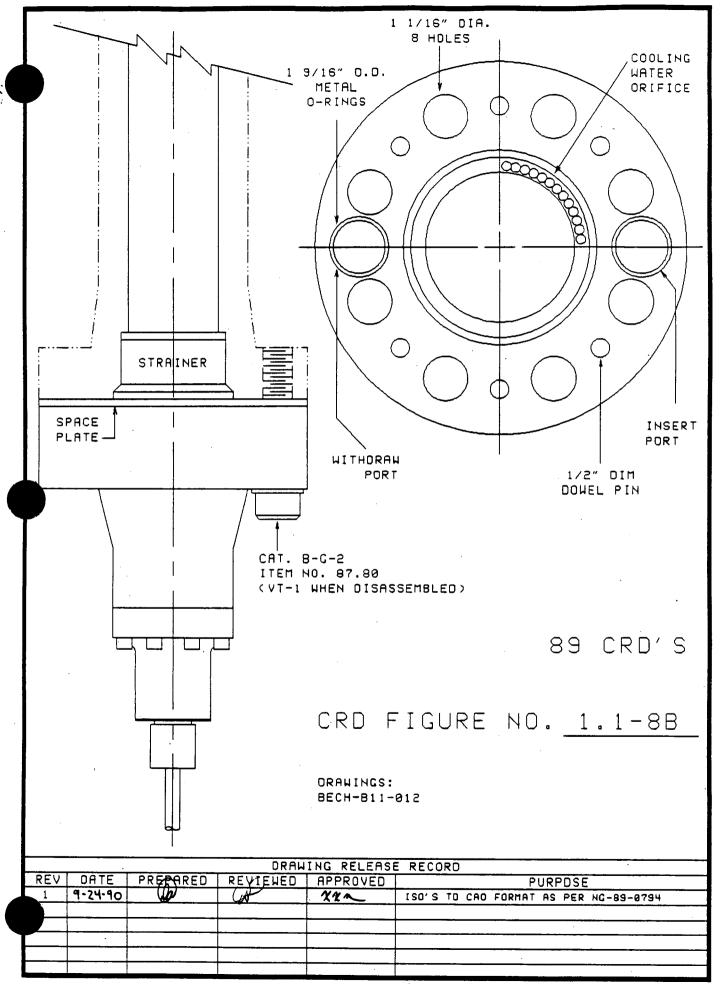
							-			
				17-221	17-221	11-221	-	- CRD I	NDENT.	
				(79)	(54)	(09)		— POSIT	ION	4
				26-03	22-03	18-03		- LOCAT		•
			T	15-8	14-1	15-1			1	
		1T-221	17-221	4	1T-221	11-221	17-221			
		(84)	(59) 30-07	(15)	(76)	(29) 18-07	(06)	(46)		
		14-12	13-8	11-8	10-1	11-1	13-1	14-2		
	1T-221	1T-221	1T-221	1T-221	17-221	1T-221	17-221	1T-221	17-221	
	(64)	(40)	(82)	(34)	(12)	(51)	(27)	(70)	(44)	
	38-11	34-11	30-11	26-11	22-11	18-11	14-11	10-11	06-11	
	14-11	12-4	9-8	8-8	7-1	8-1	9-1	12-1	14-3	
	1T-221	1T-221	1T-221	1T-221	1T-221	17-221	1T-221	1T-221	1T-221	
	(87)	(39)	(18)	(57)	(32)	(74)	(49)	(04)	(68)	
	38-15	34-15	30-15	26-15	22-15	18-15	14-15	10-15	06-15	
<del></del>	13-7	9-7	6-4	5-6	4-1	5-1	6-1	9-2	13-2	
1T-221 (42)	1T-221 (22)	1T-221 (62)	(31)	1T-221 (80)	1T-221 (55)	(10)	1T-221 (72)	1T-221 (25)	(02)	1T-221 (43)
42-19	38-19	34-19	30-19	26-19	22-19	18-19	14-19	10-19	06-19	02-19
15-7	11-7	9-7	5-7	3-4	2-1	3-1	5-2	8-2	11-2	15-2
1T-221 (66)	1T-221	1T-221 (85)	1T-221 (60)	1T-221 (16)	1T-221 (77)	1T-221 (30)	1T-221 (Ø7)	1T-221 (47)	1T-221 (24)	1T-221 (67)
42-23	38-23	34-23	30-23	26-23	22-23	18-23	14-23	10-23	06-23	02-23
14-2	10-4	7-4	4-4	2-4	1	2-2	4-2	7-2	10-5	[4-4]
17-221	17-221	17-221	1T-221	17-221	17-221	17-221		17-221	11-221	11-221
(89)	(65)	(21)	(83)	(35)	(13)	(52)	(88)	(71)	(45)	(01)
42-27 15-6	38-27 11-6	34-27 8-6	3 <b>0-27</b> 5-6	26-27 3-3	22-27 2-3	18-27 3-2	14-27 5-3	10-27 8-3	06-27 11-3	02-27 15-3
	17-121	17-221		17-221		17-221	17-221	17-221	17-221	
	(88)	(20)	(19)	(58)	(33)	(75)	(50)	(05)	(69)	4
	38-31 13-6	34-31 9-6	30-31 6-3	26-31 5-5	22-31 4-3	18-31 5-4	14-31	10-31 9-3	06-31   13-3	
	1T-221	17-221		1T-221	1T-221	17-221	17-221	1T-221	1T-221	
	(23)	(63)	(38)	(81)	(56)	(11)	(73)	(26)	(03)	
	38-35	34-35	30-35	26-35	22-35	18-35	14-35	10-35	06-35	
	14-9	12-3	9-5	8-5	7-3	8-4	9-4	12-2	14-5	
		17-221	17-221	11-221	11-221	17-221	1T-221	17-221		
		(86)	(61)	(17)	(78) 22-39	(31)	(08)	(48)		
		34-39 14-8	30-39 13-5	26-39 11-5	10-3	18-39	14-39	10-39 14-6		
				17-221	1T-221	17-221			•	
				(36)	(14)	(53)				
				26-43	22-43	18-43				
				15-5	14-7	15-4	J DF	RAWIN	GS:	

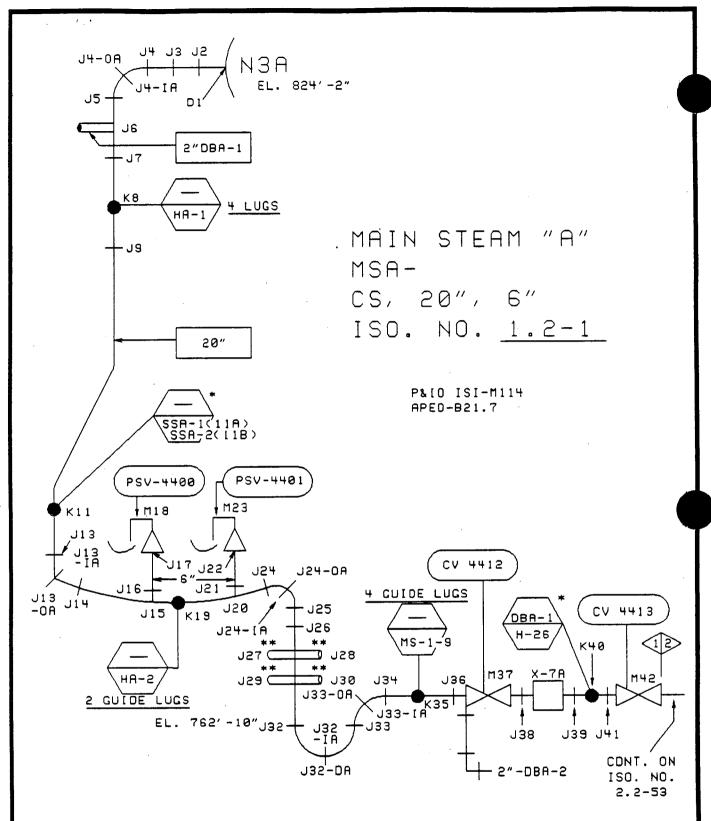
CRD LOCATION 7884-M115-15-2 7884-M115-16-2

FIGURE NO. 1.1-8A

8 BOLTS PER CRD

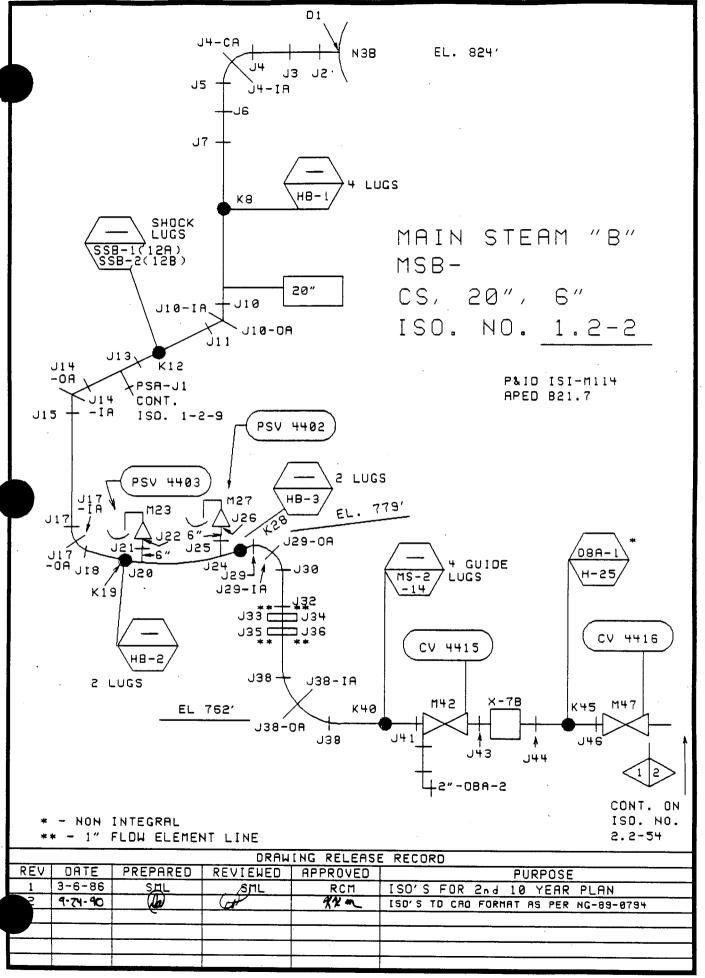
			DRAW	E RECORD	
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	4-3-86	SHL	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	(Lb)	a	22m	ISD'S TO CAO FORMAT AS PER NG-89-0794
				·	·
					·

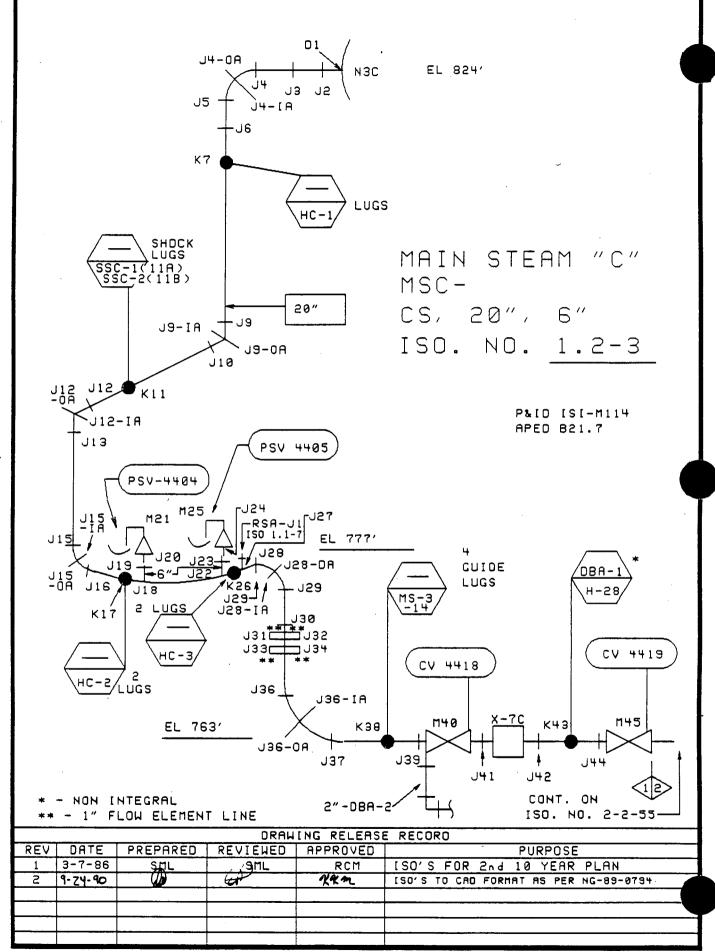


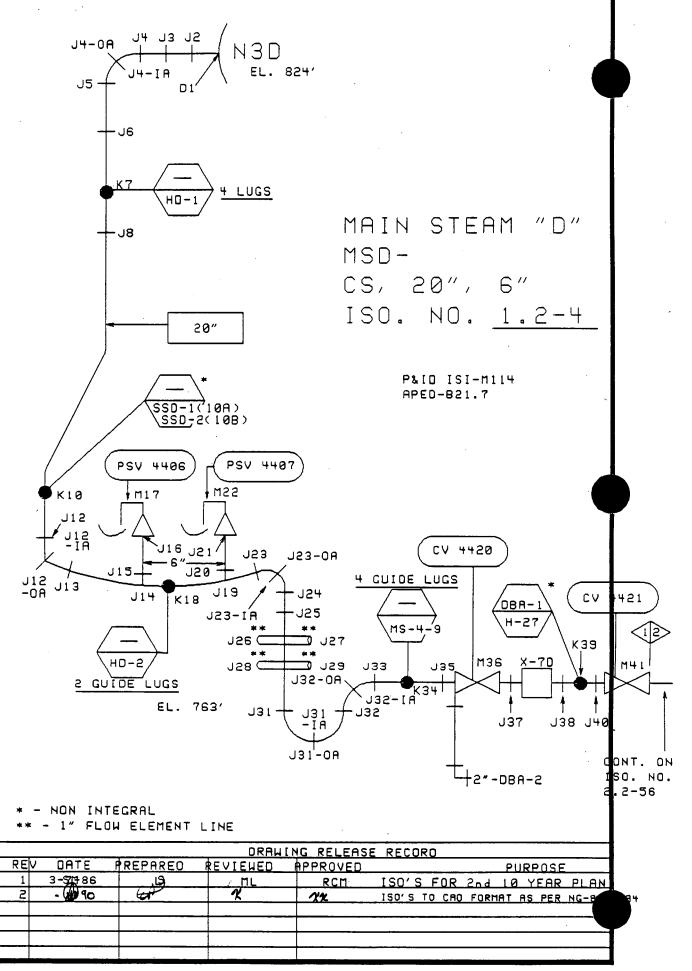


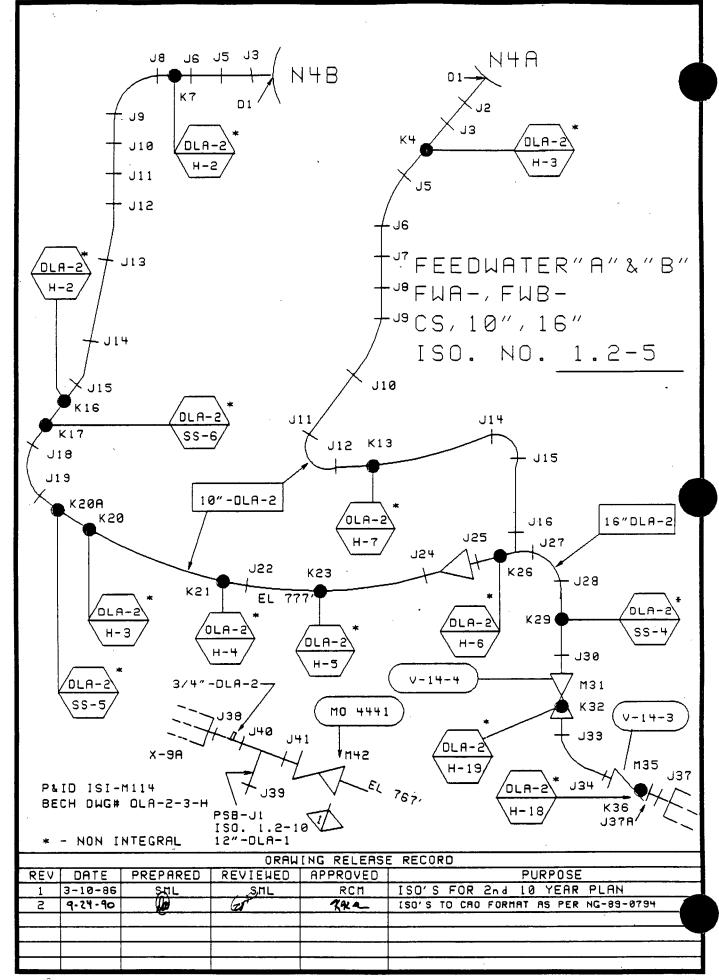
- \* NON INTEGRAL
- \*\* 1" FLOW ELEMENT LINE

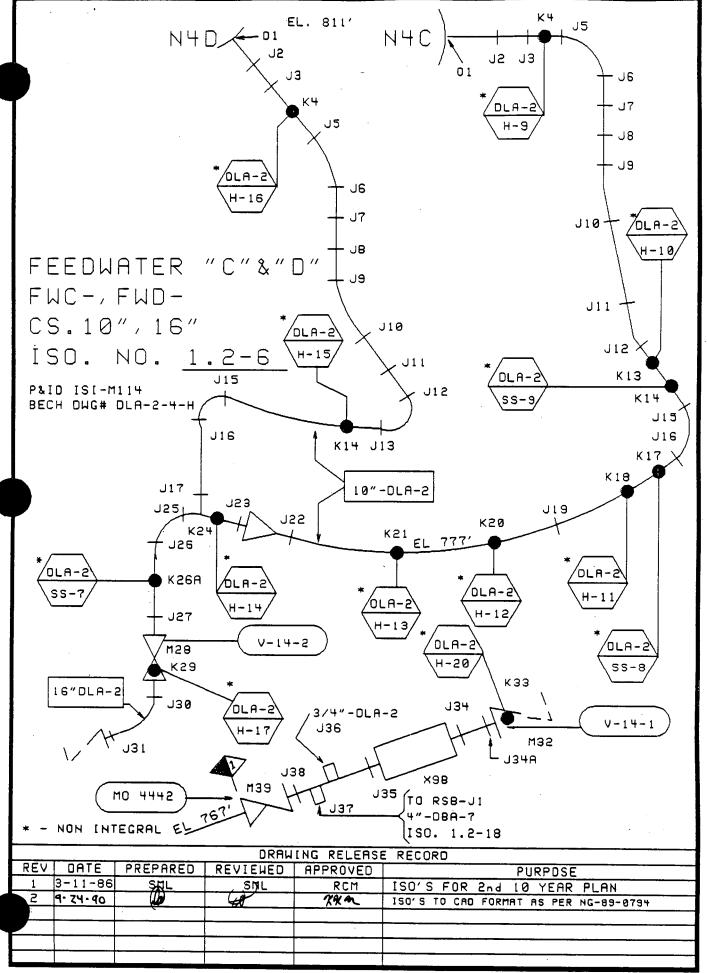
			DRAW	ING RELEASE	
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-6-86	SAL	, /SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	(Ib)	(td)	222	190'S TO CAD FORMAT AS PER NG-69-0794

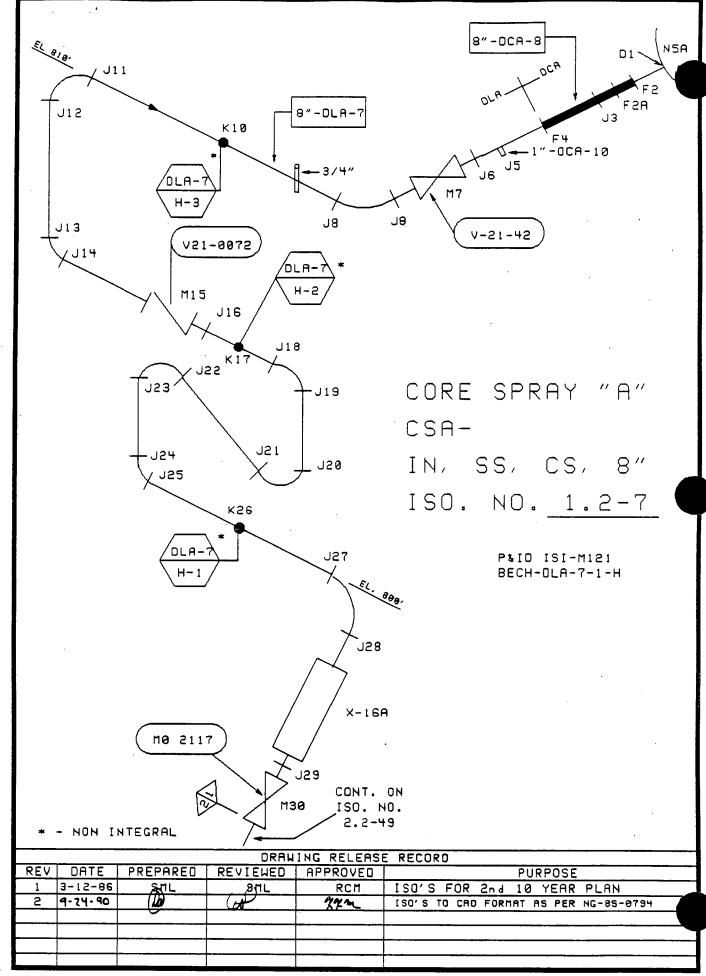










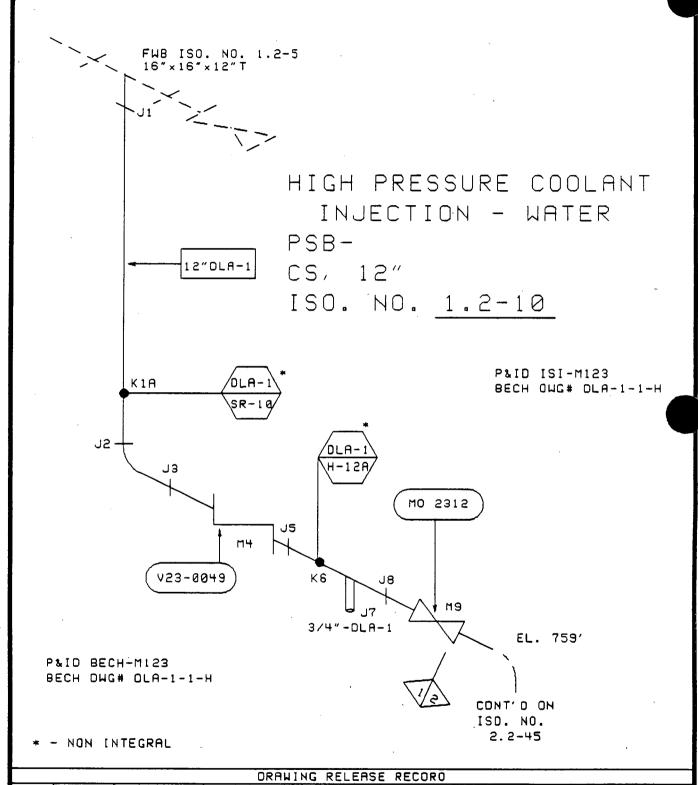


9-24-90 0ATE NON NON INTEGRAL HIGH PRESSURE COOLANT J2 1"-DCA-11 INJECTION-STEAM PSA-10"DBA-CS, 10" MØ 2238 1"-DBA-2 ISO. NO. 1.2-9 OBM31 DRAWING RELEASE DBA-P&[D [S[-M122 BECH DWG# DLA-3-1-H K9A DAEC ∕่บ∟ค-ฮ J20 ISO'S FOR ; RECORD 10" DLA-3 K18A J21 K18 K19 K16 1"-DCA-11 K21A CONT'D ON PURPOSE

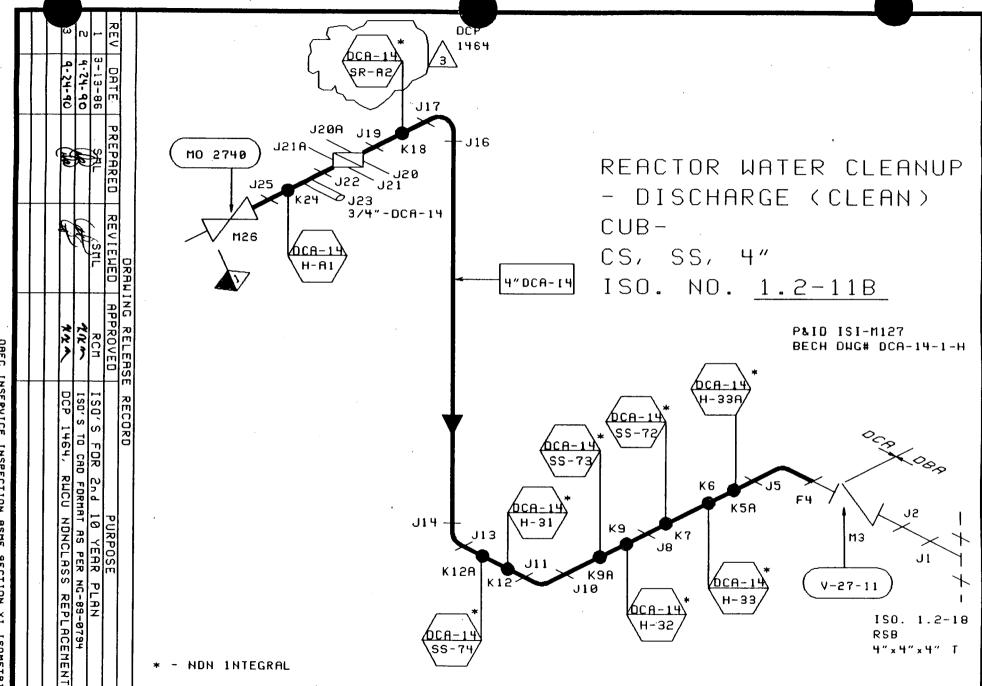
2nd 10 YEAR

FORMAT AS PER DLA-3 ISO. NO. J25 **ับเก**-3 2.2-46 DLA-3 MØ 2239 M28 J26 ⋘ 3/4″ DLA-3 PLAN

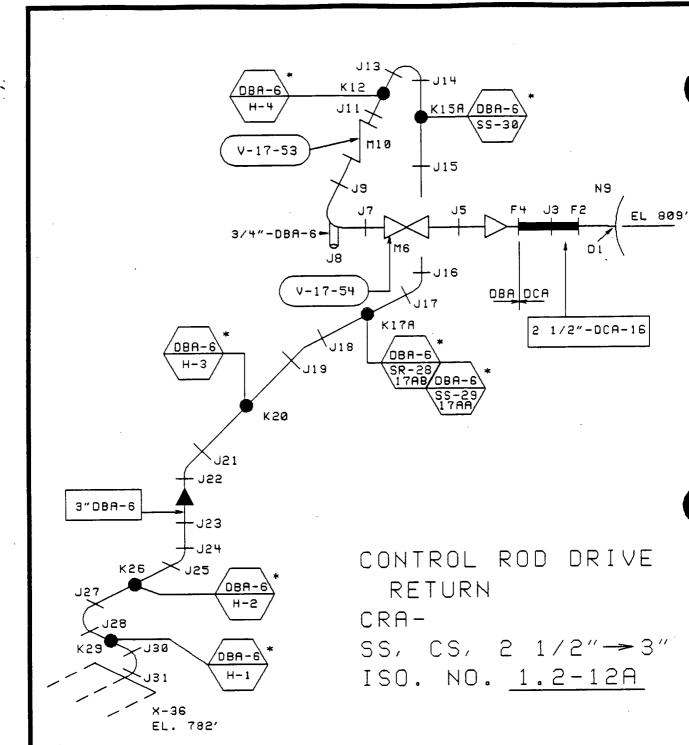
INSERVICE INSPECTION ASME SECTION ISOMETRIC



DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
3-15-86	SIL	ŞML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
9-24-40	(Ab)	ZA	xxm	ISO'S TO CHO FORMAT AS PER NG-89-0794
4		3-12-86 SML	3-12-86 SML SML	3-12-86 SML SML RCM

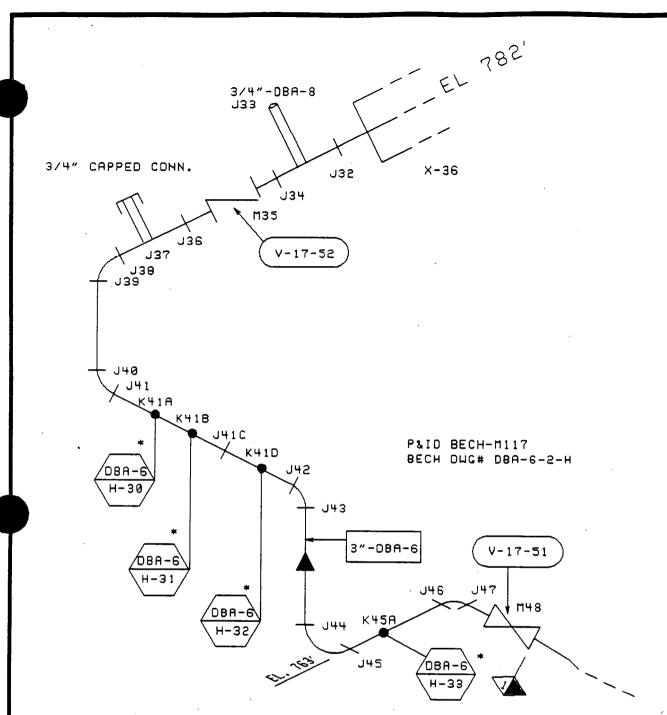


OREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC



CDNT. DN ISD. NO. 1.2-12B P&IS ISI-M117 BECH. DWG# DBA-6-1-H

			DRAW	ING RELEASE	
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
	3-13-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-24-90	(Jb)	(di	12m	ISO'S TO CAO FORMAT AS PER NG-89-0794



CONTROL ROD DRIVE RETURN

CRA-

CS, 3"

ISO. NO. <u>1.2-12B</u>

\* - NON INTEGRAL

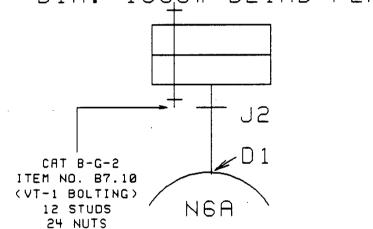
ı				DRAW	ING RELEASE	RECORD
ı	REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
ı		3-13-86	-14 <i>&amp;</i>	ML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
	2	9-24-90		4	722	ISO'S TO CAD FORMAT AS PER NG-89-0794
	<u></u>					
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ı		<del> </del>				
1						

RHR-HEADSPRAY RHA C.S.-6"

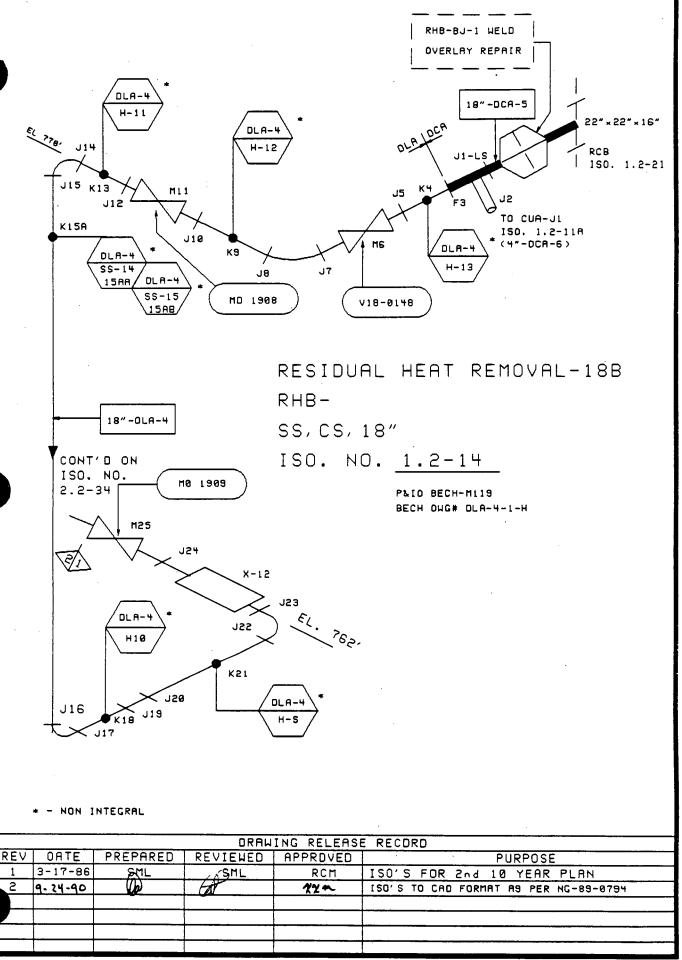
ISO. NO. 1.2-13

P&ID-M119 . BECH DWG# DBA-5-1-H

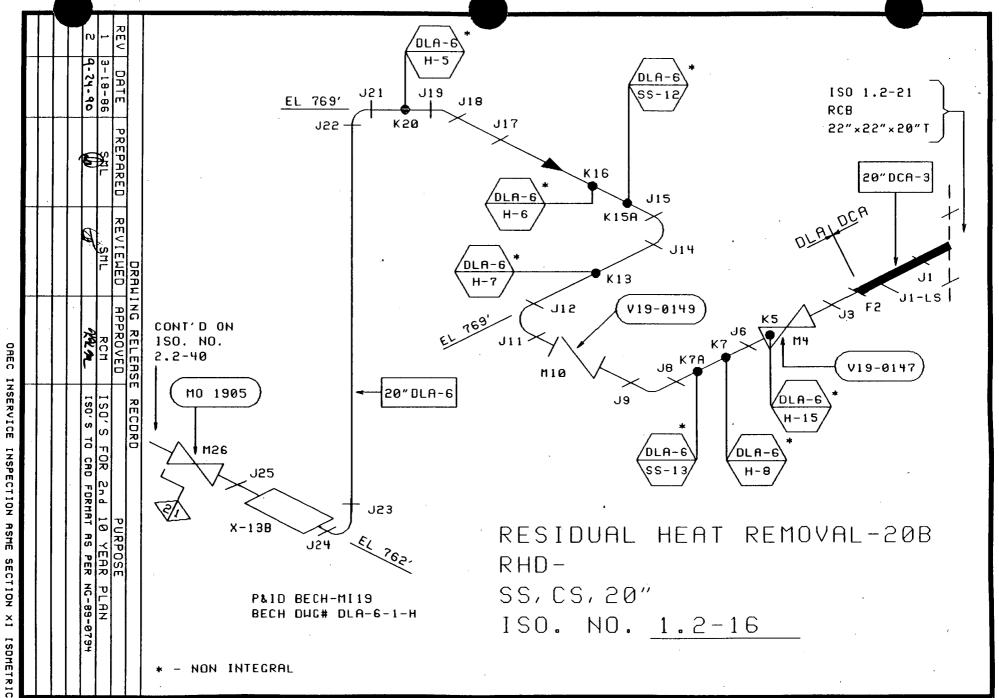
### 6" DIA. 1500# BLIND FLANGE

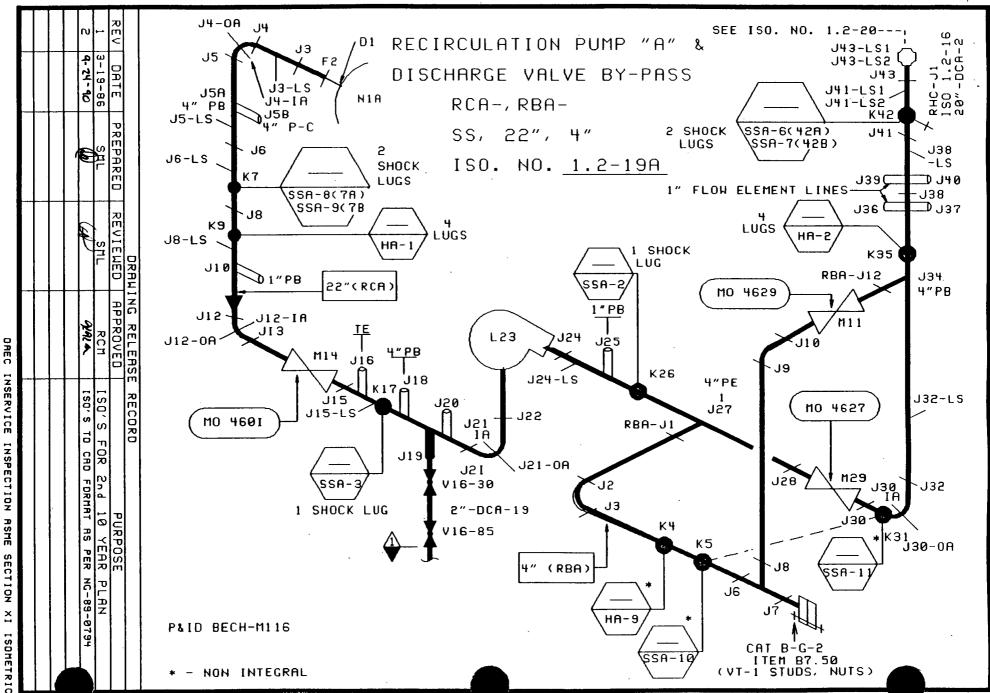


3	9-24-90	(Lb)	الكيف	Krm_	ISO'S TO CAD FORMAT AS PER NG-89-0794
2	10-26-87	JPM	RCM	REL	PORTION OF SYSTEM REMOVAL PER DCP 1385, 1987 RFO
11	3-14-86	SML	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
REV	DATE	PREPARED	REVIEWED	APPRDVED	PURPOSE

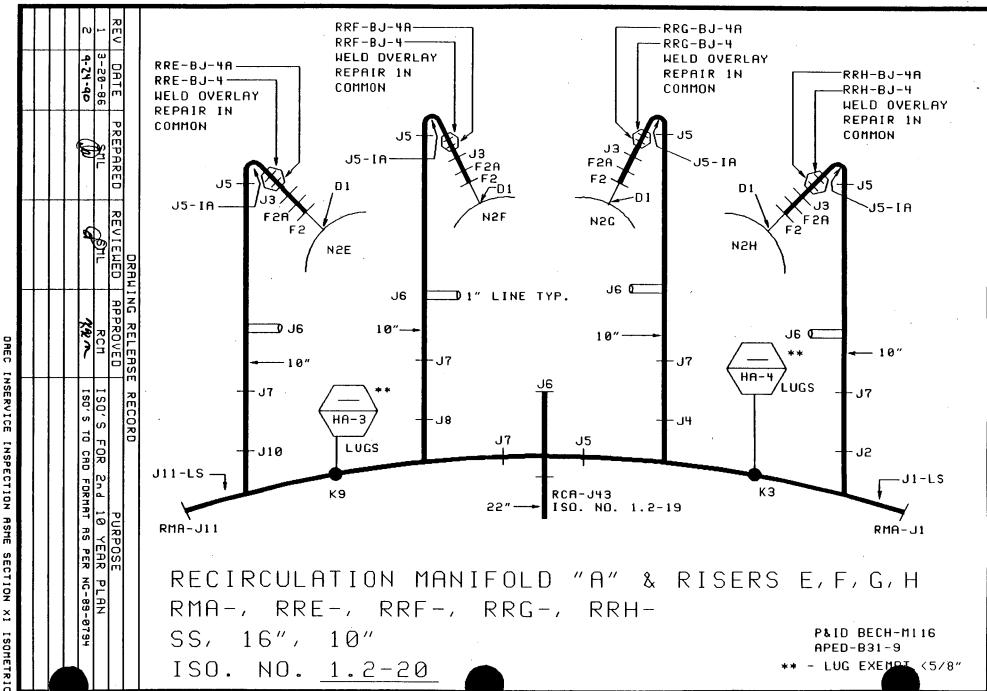


DREC INSERVICE INSPECTION ASME SECTION XI ISOMETRIC



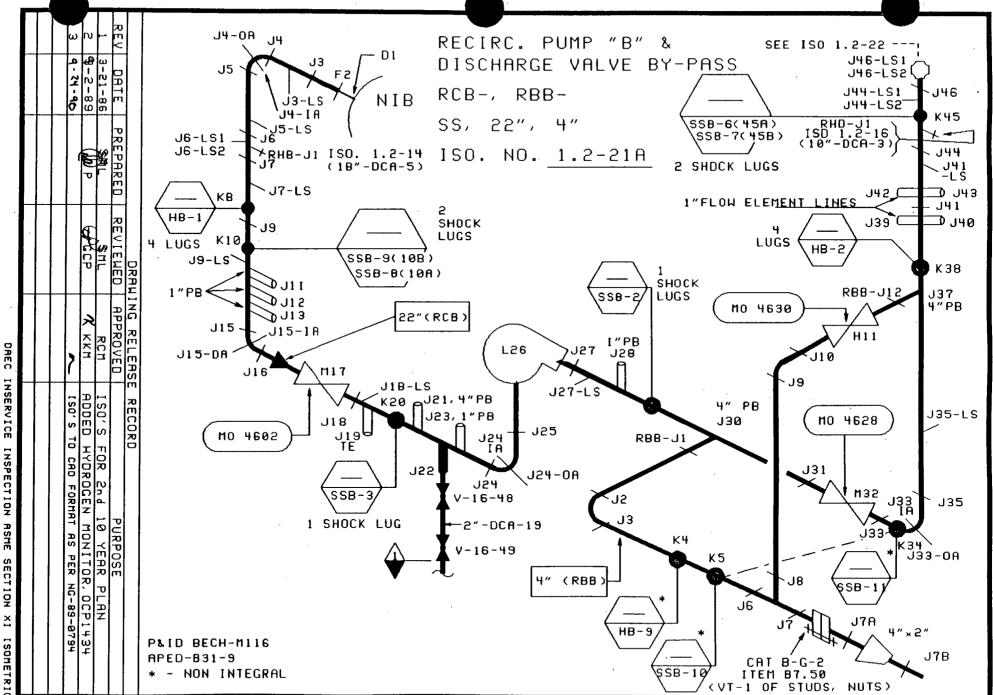


INSERVICE INSPECTION ASME SECTION × . . .

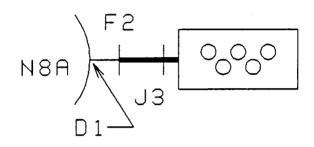


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DAEC INSERVICE INSPECTION ASME SECTION XI



INSERVICE INSPECTION ASME SECTION ×



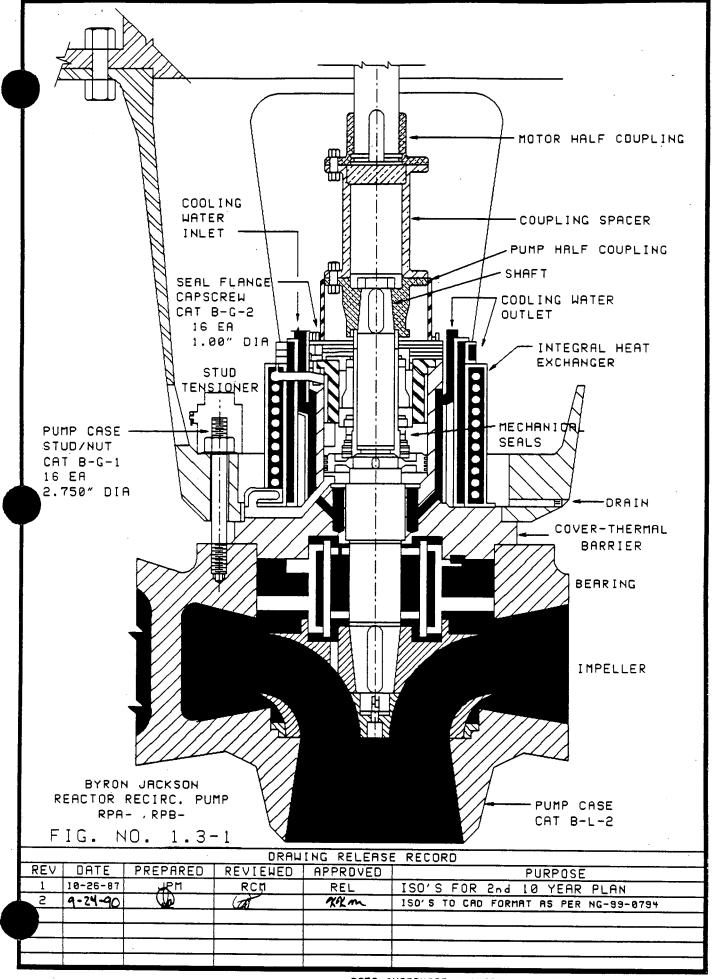
JET PUMP INSTRUMENTATION "A"

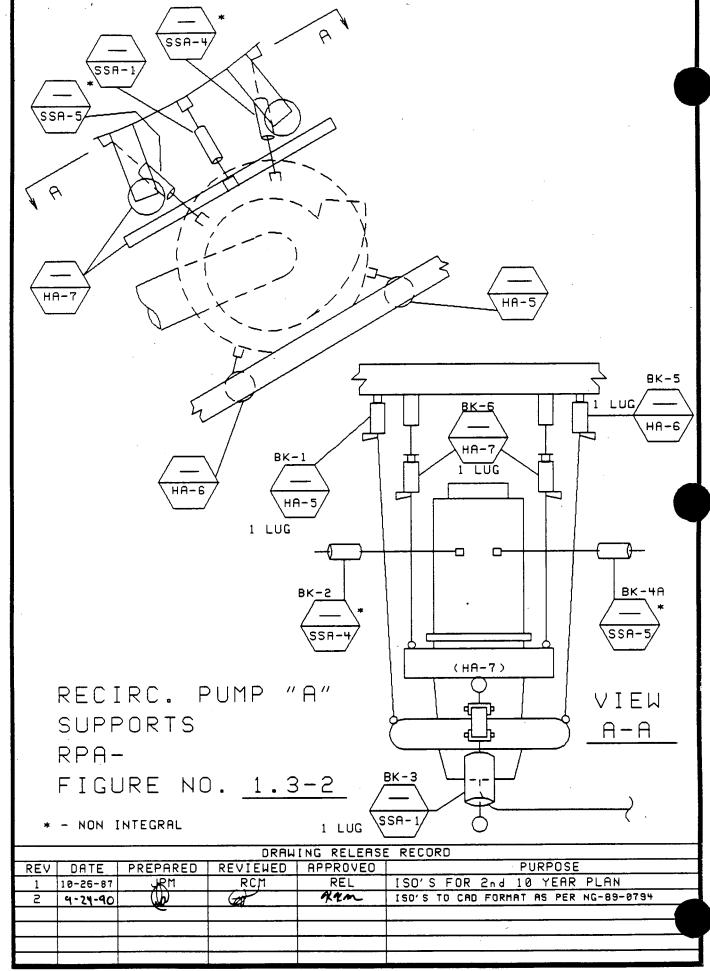
JPA
SS, 4"

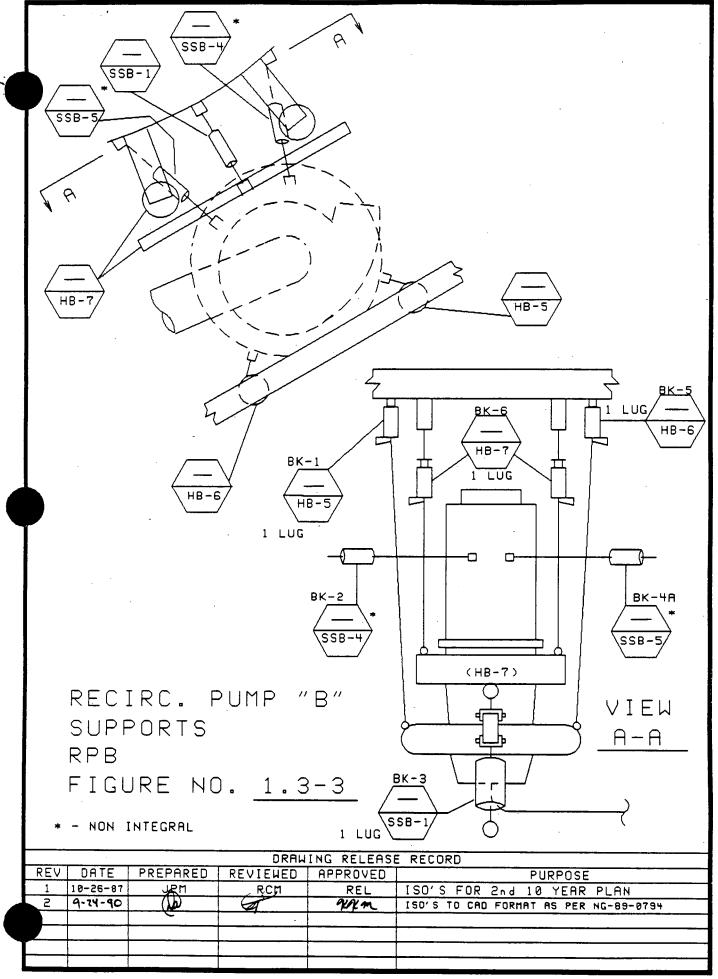
ISO. NO. <u>1.2-25</u>

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

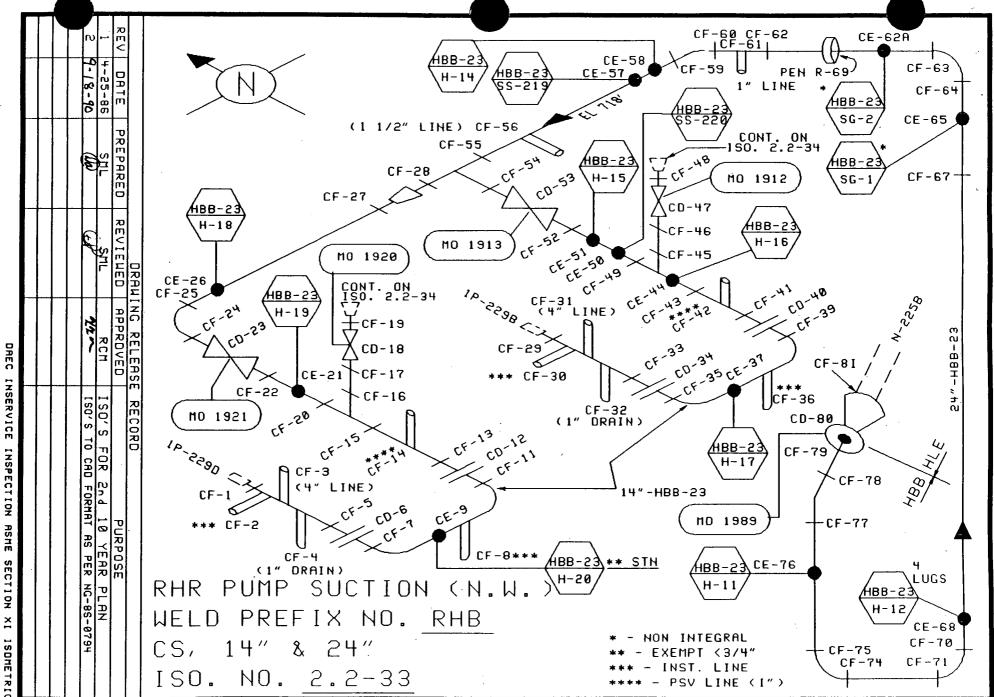
			DRAW	ING RELEASE	RECORD
REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
1	3-26-86	<i>2</i> 847L	SML	RCM	ISO'S FOR 2nd 10 YEAR PLAN
2	9-74-90	(Ab)	at	Xxm	ISO'S TO CAD FORMAT AS PER NC-85-0794



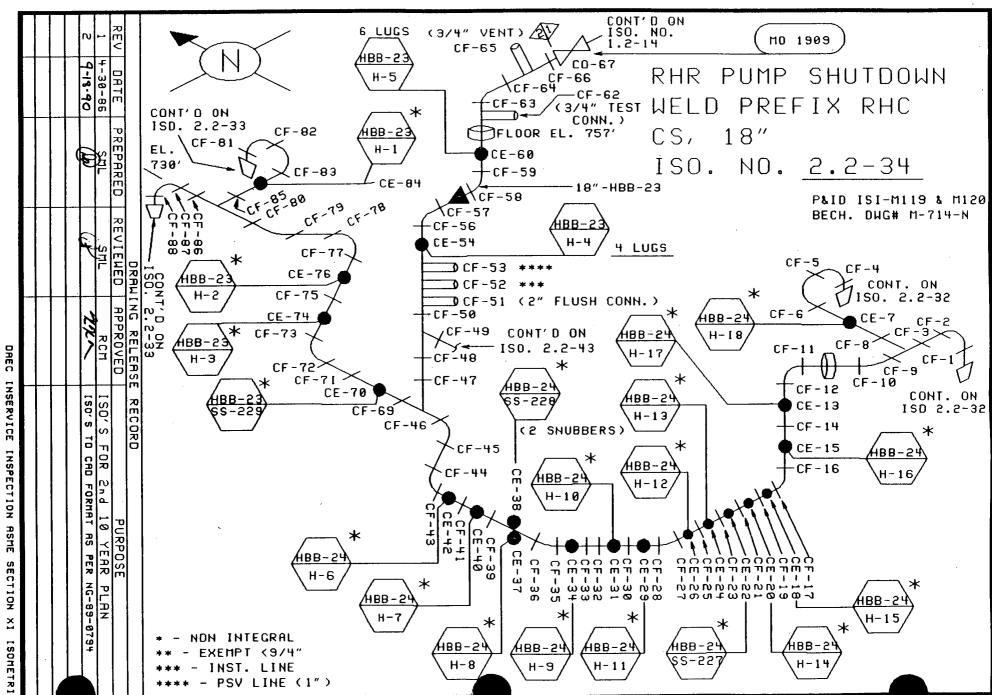




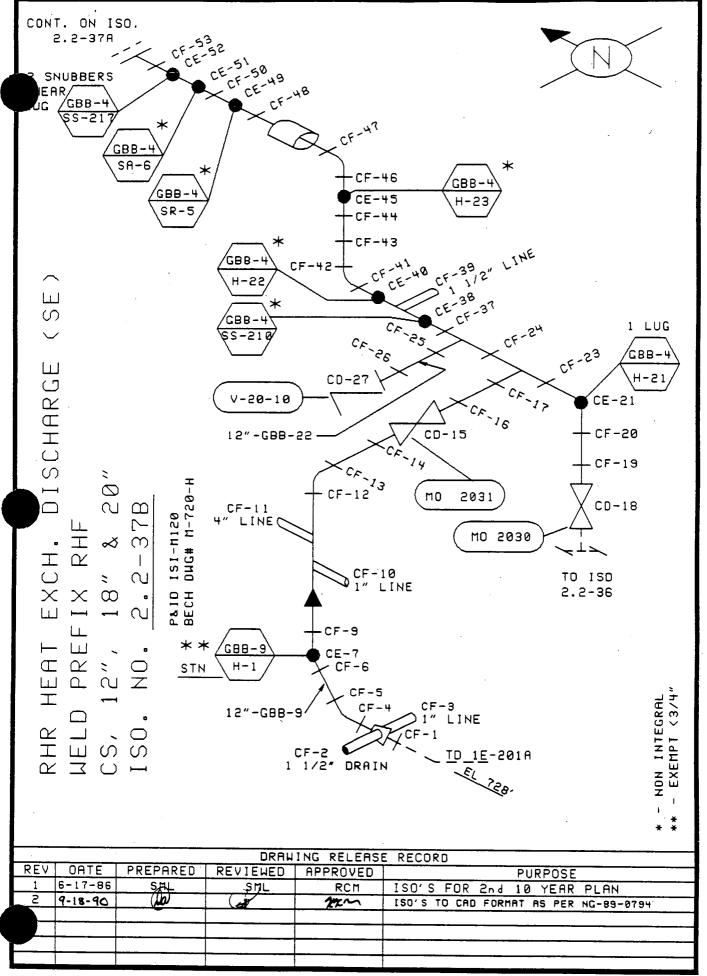
. . .



INSERVICE INSPECTION ASME SECTION ×

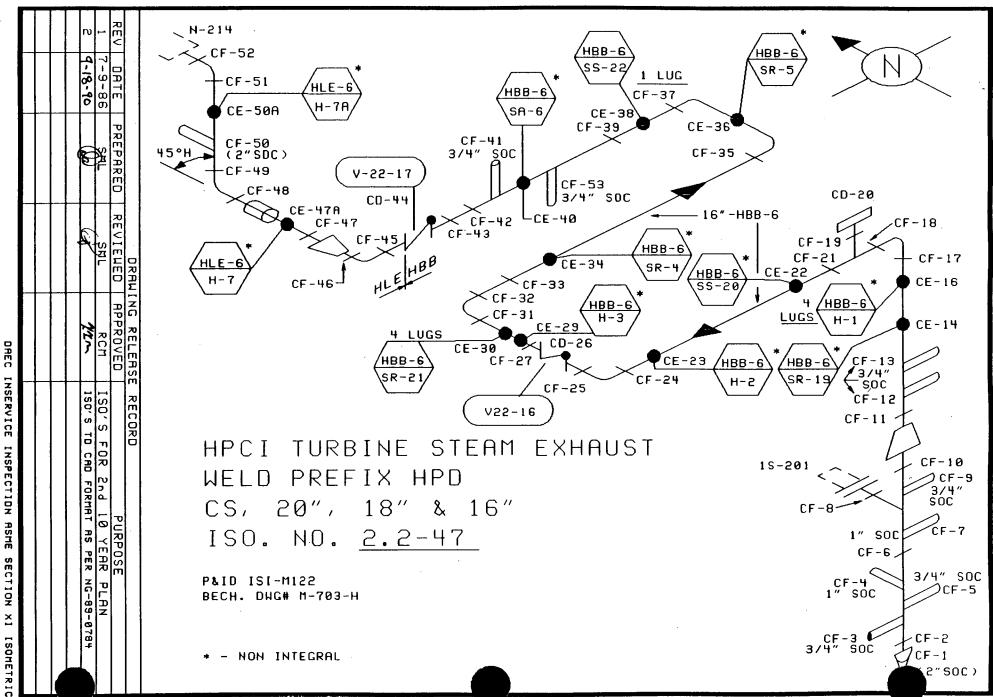


. . .



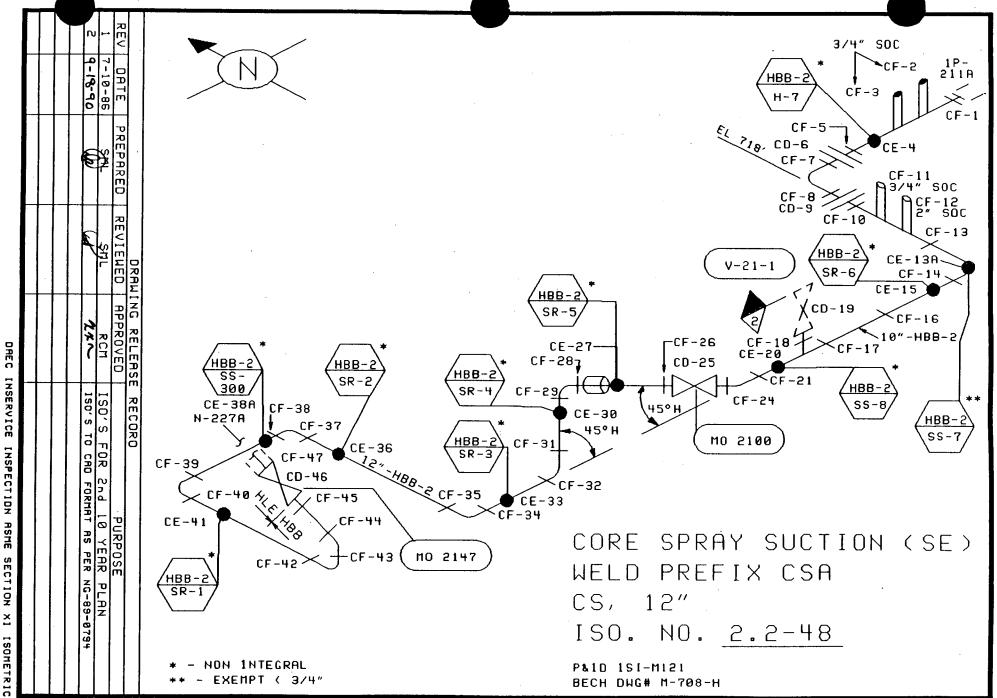
RHR FUEL POOL COOLING CF-47 STH HBB-2 CF-46 & CLEAN-UP H-173 CE-44 **98-62-9** 98-62-9 3180 PREFIX RHM CF-431 CS, 8" CF-42 8"-HBB-25 HBB-ISO. NO. 2.2-43 CE-41 CF-37 CE-3B > CF-36 CF-40 P&ID ISI-M119 & M134 CE-50 -CF-35 **BECH DUG#** HBB-25-1, 2, 3, 4 & 5 CF-39 CF-51 CF-34 CF-33 H-175 DRAWING RELEASE
IEUED APPROVED CE-35 CF-31 CF-52 CE-55 CF-30 CF-56 CF-57 DAEC CF-58 CF-59 CF-29 Δ CF-28 < CF-27 4 INSERVICE BB-2 CF-60 A 180,8 180, RECORO H-163 CF-26 LUGS - CF -66 Δ CF-24 CE-25 -CF-61 CF-67 -CF-62 리피 - CF-13 -CF-23 INSPECTION CAD CF-14 CD-68 Δ 2nd 10 ۵. CE-21 CE-11 CE-3 CONT'D DH" <del>|</del>-CF-20 PURPOSE 10 YEAR CE- CE-5 10 CE-6 CF-4 ASME CE-15 CF-19 CF-16 CE-18 SECTION CF-63 CF-17 /HBB-25 **CF-7** SA-179 PLAN NG-89-075 HBB-25 <u>2 STN</u> CF-64-HBB-25 HBB-25 HBB-2 CF-65-ISOMETRI V-34 NON INTEGRAL \*\* - EXEMPT < 3/4"

.. .

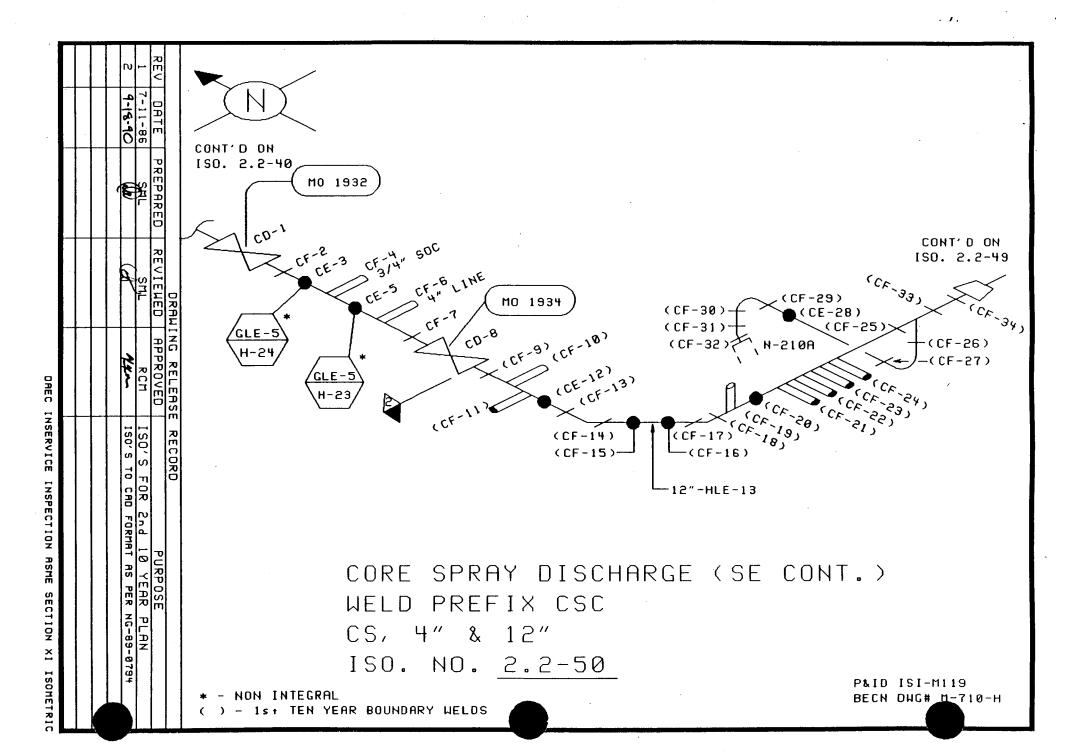


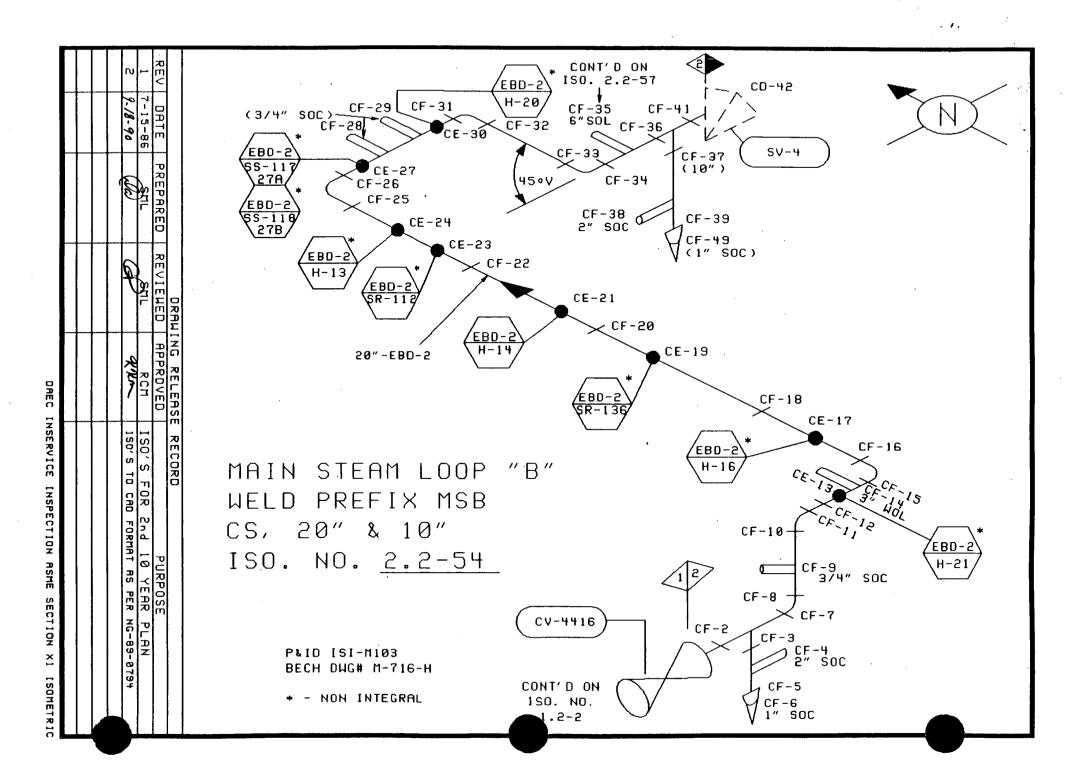
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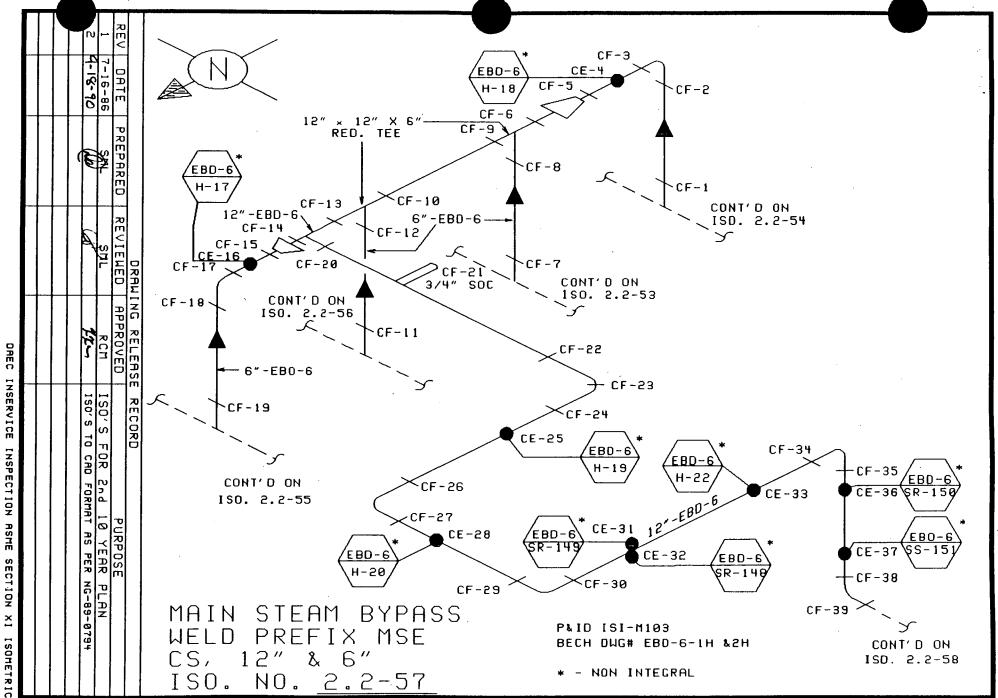
INSERVICE INSPECTION ASME SECTION ž



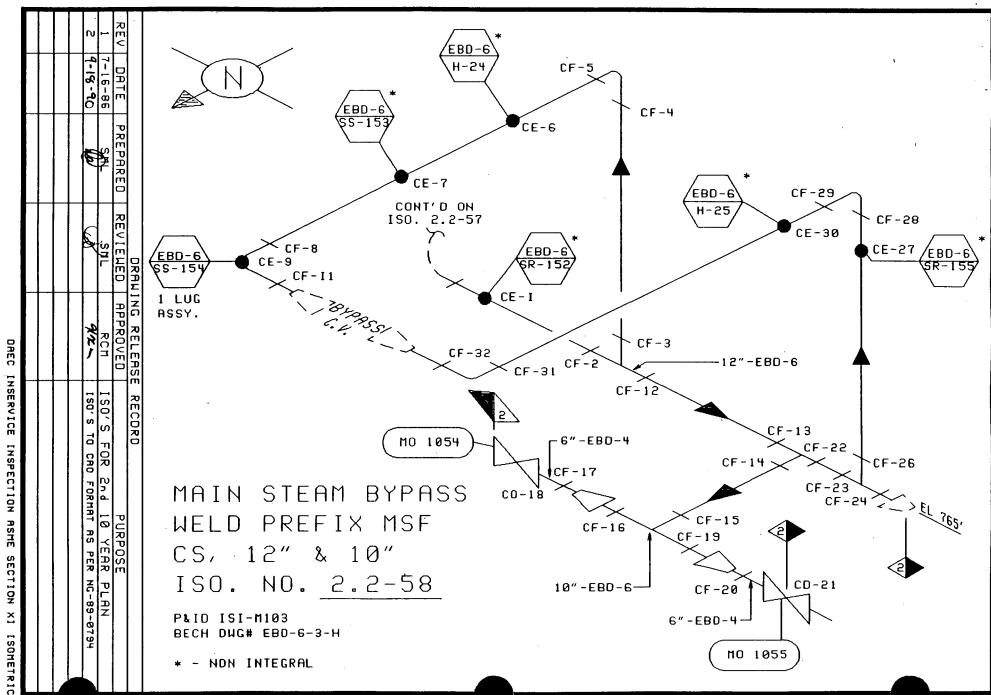
INSERVICE INSPECTION ASME SECTION ×



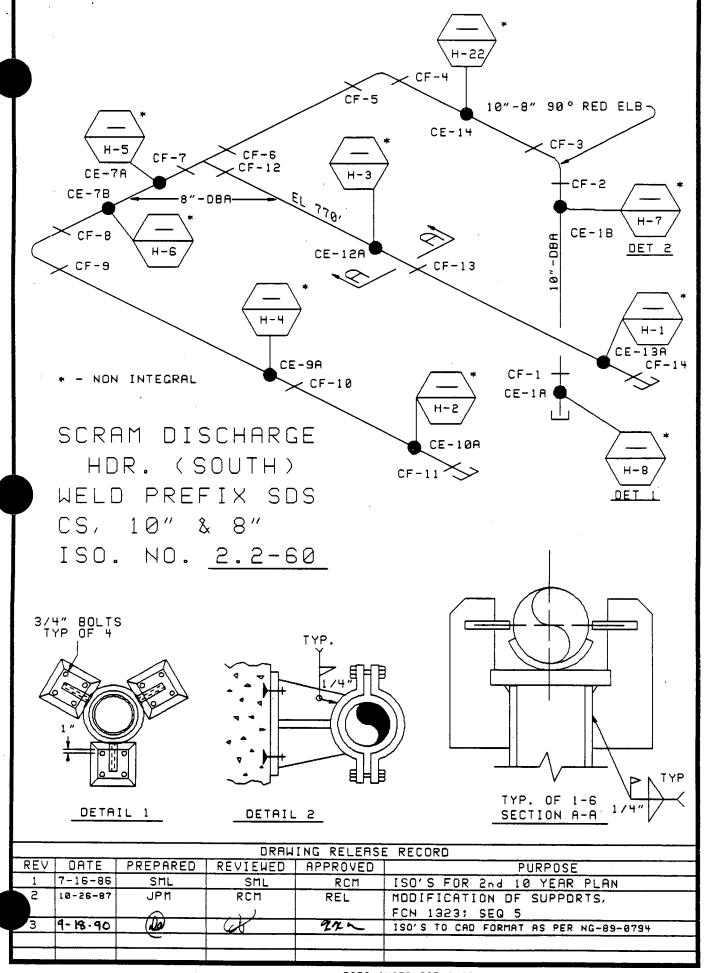




SECTION ×



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### INSERVICE INSPECTION REPORT

December 28, 1988 through September 10, 1990

1) Owners: Iowa Electric Light and Power Company

P.O. Box 351

Cedar Rapids, Iowa 52406

Central Iowa Power Cooperative Marion, Iowa

Corn Belt Power Cooperative

Humboldt, Iowa

2) Plant <u>Duane Arnold Energy Center, Palo, Iowa 52324</u>

3) Plant Unit #1

4) Owners Certificate of Authorization (if required) N/A

5) Commercial Service Date <u>2-1-75</u>

6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

#### STATUS OF WORK FOR SECOND INTERVAL

CLASS 1

16% min 16% - 34% 67% max

Item No.	Total #	Period 1	Outage 10	Remarks
B1.11	1 1	0%	0%	Permissible
B1.12		0%	0%	Permissible
B1.21B	1	0%	0%	Permissible
B1.21T	1 '	33%	66%	1/3 each period
B1.22B	1	0.8	0%	Permissible
B1.22T	1 1 1	33%	66%	1/3 each period
B1.30	1	33%	.66%	1/3 each period
B1.40	1	33%	66%	1/3 each period
B3.90	32	28%	46%	
B3.100	32	28%	46%	
B4.11	2	0%	0%	25% per interval
B4.12	89	0%	0%	25% per interval
B4.13	30	0%	0%	25% per interval
B5.1D	14	73%	73%	See Note 1
B5.20	8	12%	25%	See Note 2
B5.130	8	50%	62%	
B5.140	2	0%	50%	
B6.10	60	0%	66%	Permissible
B6.20	60	0%	66%	Permissible
B6.40	60	08	66%	Permissible
B6.50	60	0%	66%	Permissible
B6.180	2	0%	100%	16 per pump
B6.190	2	0%	100%	r - rr
B6.200	2	0%	100%	16 per pump

# INSERVICE INSPECTION REPORT ember 28, 1988 through September 10, 1990

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- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

CLASS 1 (cont.)

16% min 16% - 34% 67% max

IN m No.	Total #	Period 1	Outage 10	<u>Remarks</u>
10	3	66%	66%	
B7.50	2	0%	50%	
B7.60	2	08	100%	16 per pump
B7.70	40	N/A	N/A	Relief Request NDE-002
		,	11/11	when disassembled
B7.80	89	N/A	N/A	See Note 3
B8.10	6	28%	57%	bee note 5
B9.11	129	38%	53%	
B9.12	51	19%	43%	
B9.21	12	41%	66%	•
B9.31	8	37%	87%	
B9.32	1	0%	100%	•
B9.40	41	19%	24%	•
B10.10	34	35%	55%	
B10.20	8	25%	50%	
B12.20	2	0%	100%	
B12.50	45	N/A	N/A	Relief Request NDE-002
B13.10	*	*	*	THE THE MODE WAS NOT
B13.20	*	*	*	*Accessible areas
B13.21	*	*	*	during refueling
		•		outage
B13.22	*	*	*	Permissible
B14.10	28	0%	0%	Permissible
B15.10	3	N/A	N/A	100% per refuel outage
.11	3	N/A	N/A	Once per interval

# INSERVICE INSPECTION REPORT December 28, 1988 through September 10, 1990

Part J, Page 3

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1) Owners: Iowa Electric Light and Power Company

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- 3) Plant Unit #1
- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

CLASS 1 (cont.)

16% min

16% - 34%

67% max

Item No.	Total #	Period 1	Outage 10	Remarks
B15.50	1	N/A	N/A	100% per refuel outage
B15.51	1	N/A	N/A	Once per interval
B15.60	2	N/A	N/A	100% per refuel outage
B15.61	2	N/A	N/A	Once per interval
B15.70	1	N/A	N/A	100% per refuel outage
B15.71	1	N/A	N/A	Once per interval

Part J, Page 4 of 6

ember 28, 1988 through September 10, 1990

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5) Commercial Service Date 2-1-75

6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

#### STATUS OF WORK FOR SECOND INTERVAL

CLASS 2

16% - 34% 16

16% min 67% max

Item No.	Total #	Period 1	Outage 10	Remarks
C1.10	2	50%	50%	
C1.20	1	0%	0%	
C2.21	2	0%	0%	50% Scheduled Outage 11
C3.10	5	20%	20%	
C3.20	44	16%	34%	
C5.11	77	33%	50%	
C5.21	39	33%	53%	
C5.31	4	100%	100%	
C7.10	2	N/A	N/A	Once per period
C7.20	2	50%	50%	Once per period
C7.30	12	N/A	N/A	Once per period
C7.40	14	N/A	N/A	Once per interval
C7.50	3	N/A	N/A	Once per period
C7.60	3	N/A	N/A	Once per interval
C7.70	12	N/A	N/A	Once per period
_C7.80	12	N/A	N/A	Once per interval

## INSERVICE INSPECTION REPORT December 28, 1988 through September 10, 1990

Part J, Page 5

1) Owners: Iowa Electric Light and Power Company P.O. Box 351

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Humboldt, Iowa

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- 4) Owners Certificate of Authorization (if required) N/A
- 5) Commercial Service Date <u>2-1-75</u>
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

	SUPPORTS								
CLASS 1		16%-34%	16% min 67% max						
Item No.	Total #	Period 1	Outage 10	Remarks					
F2.00 F3.00	15 166	20% 35%	26% 52%						
CLASS 2									
F1.00 F2.00 F3.00	71 34 231	38% 20% 34%	52% 35% 52%						

#### Note 1 - Item Number B5.1D

11 nozzle to safe-end welds were completed during Outage 08, Period 1. These were submitted in the Summary Report for that period thus credit was taken for those completed. During Outage 10, 3 of the 11 nozzle to safe-end welds were examined again and are submitted in this Summary Report. Because these 3 were already examined the percentages do not change. 7 of the 11, completed during Outage 08, are scheduled for examination during the remainder of this interval.

Part J, Page 6 of 6

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- 3) Plant Unit #1
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- 5) Commercial Service Date 2-1-75
- 6) National Board Number of Unit N/A

GROSS GENERATING CAPACITY: 565 MWE

Note 2 - Item Number B5.20

There was one nozzle to safe-end weld  $\leq$  4" scheduled during Outage 08, Period 1. Because of an oversight, there weren't any scheduled in Outage 09, Period 1. CRA-F002 was completed during Outage 10 which brings the percentage within Code allowable. There are 2 more scheduled for the next refueling outage which will bring the percentage to 50% at the end of period 2.

Note 3 - Item Number B7.80 (CRD Bolting)

There are no percentages calculated for this item number because each CRD that is removed receives a VT-1 examination on the bolting. There are usually 20 scheduled per outage.

Attachment 2 to NG-90-2858 Page 1 of 17

System or Component Description	A C <u>C</u>	R E J	Inspection <u>Requirement</u>	Weld or Component Description	UT Report <u>No.</u>	Visual Report No.	PT Report <u>No.</u>	ISI ISO/Fig No.	Comments
RPV Interior	x		E	Jet Pump (MIL)	N/A	*	N/A	None	Visual inspection of PMP MIL 9 thru 16
	x		Н	Jet Pump (RB)	N/A	*	N/A	None	Visual inspection of PMP RB 9 thru 16
	x		I.	Jet Pump (ASS)	N/A	*	N/A	None	Visual inspection of PMP ASS 9 thru 12
	х		I	Jet Pump (RSS)	N/A	*	N/A	None	Set screw tack welds on Jet Pump 2, 4, 5 & 10 reported indications, acceptable as per NCR #90-076 jet pumps 1 - 16 examined.
	х		C,F	Core Spray Spargers	N/A	*	N/A	None	Spargers A,B,C,D; Thermal
				Thermal Sleeve, Nozzi	Le			·	Sleeve A,B and Nozzle A,B, T-Box Welds
	х		В	Feedwater Nozzle A	89-46	*	89-441	1.1-9	Inside vessel: right installation bracket accept- able as per NCR-90-70 UT was performed from OD
	x		В	Feedwater Nozzle B	89-47	*	89-442	1.1-9	Inside vessel UT was performed from OD.
	x		В	Feedwater Nozzle C	89-49	*	89-443	1.1-9	Inside vessel UT was performed from OD

Attachment 2 to NG-90-2858 Page 2 of 17

System or Component Description	A C <u>C</u>	R E J	Inspection Requirement	Weld or Component <u>Description</u>	UT Report No.	Visual Report No.	PT Report No.	ISI ISO/Fig No.	<u>Comments</u>
	x		В	Feedwater Nozzle D	89-49	*	89-444	1.2-5	Inside vessel UT was performed from OD
	x		В	CRD Return Line Nozzle	N/A	*	89-440	1.1-9	Indications found, repair by grinding, only in cladding
	x		G	Steam Dry DRN CHAN	N/A	*	N/A	None	Acceptable as per NCR 90-069
			•	Steam Dry EXT SURF	N/A	*	N/A	None	
,	x		K	Vessel Head	N/A	*	N/A	None	VT-1 inspection
Feedwater 'A'	x		В	FWA-BD-1	89-42	N/A	N/A	1.1-9	UT-0
	x		В	FWA-BD-1	89-43	N/A	N/A	1.1-9	UT-45
	x		В	FWA-BD-1	89-44	N/A	N/A	1.1-9	UT-60
	x		В	FWA-BD-1 (Bore)	89-46	N/A	N/A	1.1-9	UT-30
	x		В	FWA-BD-1 (T.S.)	89-50	N/A	N/A	1.1-9	UT-45
	x		В	FWA-BD-1 (IR)	89-45	N/A	N/A	1.1-9	UT-70
	x		В	FWA-BD-1 (T.S.)	89-51	N/A	N/A	1.1-9	UT-60
Feedwater 'B'	x		В	FWB-BD-1 (Bore)	89-47	N/A	N/A	1.1-9	UT-30
Feedwater 'C'	x		В	FWC-BD-1 (Bore)	89-49	N/A	N/A	1.1-9	UT-30

Attachment 2 to NG-90-2858 Page 3 of 17

System or Component <u>Description</u>	A C <u>C</u>	R E J	Inspection Requirement	Weld or Component <u>Description</u>	UT Report <u>No.</u>	Visual Report No.	PT Report No.	ISI ISO/Fig <u>No.</u>	Comments
Feedwater 'D'	x		В	FWD-BD-1 (Bore)	89-48	N/A	N/A	1.1-9	UT-30
CRD Return	x		В	CRA-F002	89-151	N/A	N/A	1.2-12A	Stainless steel side
	x		В	CRA-F002	89-150	N/A	N/A	1.2-12A	Carbon steel side
	x		В	CRA-J003	89-149	N/A	N/A	1.2-12A	,
	x		В	CRA-F004	89-147	N/A	N/A	1.2-12A	Stainless steel side
	x		В	CRA-F004	89-148	N/A	N/A	1.2-12A	Carbon steel side
Core Spray 'A'	x		J,A	CSA-F002	89-127	N/A	N/A	1.2-7	UT-RL
	x		J,A	CSA-F002	89-128	N/A	N/A	1.2-7	UT-45 (safeend side only)
	x		A	CSA-F002A	89-125	N/A	N/A	1.2-7	Pipe side
	x		A	CSA-F002A	89-126	N/A	N/A	1.2-7	Safeend side
	x		A	CSA-J003	89-124	N/A	N/A	1.2-7	
	x		A	CSA-F004	89-122	N/A	N/A	1.2-7	Carbon steel side
	x		A	CSA-F004	89-123	N/A	N/A	1.2-7	Stainless steel side
Reactor Water Cleanup Discharge (Class 1)	x		A	CUB-F004	89-143	N/A	N/A	1.2-11B	

Attachment 2 to NG-90-2858 Page 4 of 17

System or Component Description	А С <u>С</u>	R E J	Inspection Requirement	Weld or Component Description	UT Report <u>No.</u>	Visual Report No.	PT Report No.	ISI ISO/Fig <u>No.</u>	Comments
	x		A	CUB-J005	89-142	N/A	N/A	1.2-11B	
	x		A	CUB-J008	89-141	N/A	N/A	1.2-11B	
	x		A	CUB-J010	89-140	N/A	N/A	1.3-11B	
	x		A	CUB-J011	89 <b>-139</b>	N/A	N/A	1.2-11B	
	x		A	CUB-J013	89 <b>-</b> 13 <b>8</b>	N/A	N/A	1.2-11B	
	x		A	CUB-J014	89-137	N/A	N/A	1.2-11B	
·	х		A	CUB-J016	89-136	N/A	N/A	1.2-11B	
	x		A	CUB-J017	89-135	N/A	N/A	1.2-11B	
Residual Heat Removal - 18B	х		A	RHB-J001-OVL	89-164	N/A	N/A	1.2-14	UT-60 overlay weld
	x		A	RHB-J002	89 <b>-</b> 1 <b>6</b> 5	N/A	N/A	1.2-14	
	х		A	RHB-F003	89-169	N/A	N/A	1.2-14	Stainless steel side
	х		A	RHB-F003	89-170	N/A	N/A	1.2-14	Carbon steel side
Recirc Pump 'A' Suction	х		J,A	RCA-F002	89-192	N/A	N/A	1.2-19	UT-RL
	х		J,A	RCA-F002	89-191	N/A	N/A	1.2-19	UT-45 safeend side only

Attachment 2 to NG-90-2858 Page 5 of 17

System or Component <u>Description</u>	A C <u>C</u>	R E <u>J</u>	Inspection Requirement	Weld or Component <u>Description</u>	UT Report <u>No.</u>	Visual Report <u>No.</u>	PT Report <u>No.</u>	ISI ISO/Fig <u>No.</u>	<u>Comments</u>
	X		A	RCA-J004	89-208	N/A	N/A	1.2-19	
	X		A	RCA-J005A	89-196	N/A	N/A	1.2-19	
	x		A	RCA-J018	89-197	N/A	N/A	1.2-19	
	x		A	RCA-J021	89-193	N/A	N/A	1.2-19	
	x		A	RCA-J022	89-194	N/A	N/A	1.2-19	
	x		<b>A</b>	RCA-J024	89-195	N/A	N/A	1.2-19	
	X		A	RCA-J027	89-198	N/A	N/A	1.2-19	
	x		A	RCA-J034	89-199	N/A	N/A	1.2-19	
Recirc Bypass	х		A	RBA-J001	89-182	N/A	N/A	1.2-19	
	X		A	RBA-J002	89-183	N/A	N/A	1.2-19	
	X		A	RBA-J003	89-184	N/A	N/A	1.2-19	
	X		A	RBA-J006	89-185	N/A	N/A	1.2-19	
	X		A	RBA-J007	89 <b>-18</b> 6	N/A	N/A	1.2-19	
	x		A	RBA-J008	89-187	N/A	N/A	1.2-19	
	X		A	RBA-J009	89-188	N/A	N/A	1.2-19	

Attachment 2 to NG-90-2858 Page 6 of 17

System or Component Description	A C <u>C</u>	R E <u>J</u>	Inspection Requirement	Weld or Component Description	UT Report <u>No.</u>	Visual Report No.	PT Report No.	ISI ISO/Fig No.	<u>Comments</u>
	X		A	RBA-J010	89-189	N/A	N/A	1.2-19	
	X		A	RBA-J012	89-190	N/A	N/A	1.2-19	
Recirc Manifold 'A'	x		Α	RMA-J005	89-224	N/A	N/A	1.2-20	
	х		A	RMA-J007	89-223	N/A	N/A	1.2-20	
	x		A	RMA-J008	89-225	N/A	N/A	1.2-20	
	x		A	RMA-J010	89-226	N/A	N/A	1.2-20	
Recirc Riser	x		J, A	RRE-F002	90-62	N/A	N/A	1.2-20	UT-RL
	x		J, A	RRE-F002	90-56	N/A	N/A	1.2-20	UT-45 (safeend side only)
	X		A	RRE-J003	89-230	N/A	N/A	1.2-20	UT-45
	x		A	RRE-J004/ J004A OVL	89-235	N/A	N/A	1.2-20	UT-45 UT-60 weld overlay
	X		A	RRE-J005	89-229	N/A	N/A	1.2-20	
	х		A	RRE-J007	90-298	N/A	N/A	1.2-20	UT-45
Recirc Riser	x		J, A	RRF-F002	89-244	N/A	N/A	1.2-20	UT-RL
	х		J, A	RRF-F002	89-245	N/A	N/A	1.2-20	UT-48 (safeend side only)

Attachment 2 to NG-90-2858 Page 7 of 17

System or Component Description	A C <u>C</u>	R E <u>J</u>	Inspection Requirement	Weld or Component <u>Description</u>	UT Report No.	Visual Report No.	PT Report No.	ISI ISO/Fig <u>No.</u>	<u>Comments</u>
	x		A	RRF-F002A Code Only	89-247	N/A	N/A	1.2-20	
	х		A	RRF-J003	89-228	N/A	N/A	1.2-20	
	x		A	RRF-J004/ J004A OVL	89-237	N/A	N/A	1.2-20	UT-60 weld overlay
	x		A	RRF-J005	89-227	N/A	N/A	1.2-20	
	x		A	RRF-J007	90 <b>-29</b> 7	N/A	N/A	1.2-20	
Recirc Riser	х		A,J	RRG-F002	90-63	N/A	N/A	1.2-20	UT-RL
	х		J, A	RRG-F002	90-58	N/A	N/A	1.2-20	UT-45: Safeend side only
	x		A	RRG-J003	89-231	N/A	N/A	1.2-20	
	x		A	RRG-J004/ J004A OVL	89-233	N/A	N/A	1.2-20	UT-60 weld overlay
Recirc Riser	x		J, A	RRH-F002	90-64	N/A	N/A	1.2-20	UT-RL
	x		J, A	RRH-F002	90-60	N/A	N/A	1.2-20	UT-45 safeend side only
	х		A	RRH-J003	89-240	N/A	N/A	1.2-20	
	x		A	RRH-J004/ J004A-OVL	89-239	N/A	N/A	1.2-20	UT-60 weld overlay

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System or Component Description	<b>A</b> C <u>C</u>	R E <u>J</u>	Inspection Requirement	Weld or Component Description	UT Report No.	Visual Report No.	PT Report No.	ISI ISO/Fig No.	<u>Comments</u>
Recirc Pump 'B' Suction	x		A	RCB-J006	89-248	N/A	N/A	1.2-21	
	х		A	RCB-J007	89-249	N/A	N/A	1.2-21	
	х		A	RCB-J009	89-250	N/A	N/A	1.2-21	
Recirc Manifold 'B'	х		A	RMB-J009	89-253	N/A	N/A	1.2-22	
	х		A	RMB-J011	89-254	N/A	N/A	1.2-22	
	х		A	RMB-J012	89-252	N/A	N/A	1.2-22	
Recirc Riser	х		A	RRA-J003	89-262	N/A	N/A	1.2-22	
'A'	х		A	RRA-J004/ J004A-OVL	89-261	N/A	N/A	1.2-22	UT-60 weld overlay
	х		A	RRA-J005	89 <b>-259</b>	N/A	N/A	1.2-22	
	x		A	RRA-J007	89-258	N/A	N/A	1.2-22	•
Recirc Riser	x		Α	RRB-J003	89-257	N/A	N/A	1.2-22	
	х		A	RRB-J004/ J004A-OVL	89-256	N/A	N/A	1.2-22	UT-60 weld overlay
Recirc Riser	Х		A	RRC-J003	89-263	N/A	N/A	1.2-22	

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System or Component Description	A C <u>C</u>	R E J	Inspection Requirement	Weld or Component <u>Description</u>	UT Report <u>No.</u>	Visual Report <u>No.</u>	PT Report <u>No.</u>	ISI ISO/Fig No.	Comments
Recirc Riser	x		A	RRD-J003	89-268	N/A	N/A	1.2-22	
	х		A	RRD-J004/ J004A-OVL	89-267	N/A	N/A	1.2-22	UT-60 weld overlay
	х		Α	RRD-J007-OVL	89-265	N/A	N/A	1.2-22	UT-60 weld overlay
Jet Pump Inst.	x		A	JPA-F002	89-269	N/A	N/A	1.2-25	Safeend side
	x		A	JPA-F002	89-270	N/A	N/A	1.2-25	Nozzle side
	x		Α	JPA-J003	89-271	N/A	N/A	1.2-25	
Jet Pump Inst.			A	JPB-F002	89-275	N/A	N/A	1.2-26	Safeend side
			A	JPB-F002	89-274	N/A	N/A	1.2-26	Nozzle side
•			A	JPB-F003	89-276	N/A	N/A	1.2-26	
Reactor Water Cleanup (Non- Class) 'CUA'	x		A	CUA-A-01	90-66	N/A	N/A	4.1-01	Preservice replacement
	x		A	CUA-A-03	90-67	N/A	N/A	4.1-01	Preservice replacement
	x		A	CUA-A-04	90~68	N/A	N/A	4.1-01	Preservice replacement

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System or Component Description	A C <u>C</u>	R E J	Inspection Requirement	Weld or Component <u>Description</u>	UT Report No.	Visual Report No.	PT Report <u>No.</u>	ISI ISO/Fig No.	Comments
	x		A	CUA-A-05	90-69	N/A	N/A	4.1-01	Preservice replacement
	x		A	CUA-A-06	90-70	N/A	N/A	4.1-01	Preservice replacement
	x		A	CUA-A-07	90-71	N/A	N/A	4.1-01	Preservice replacement
	х		A	CUA-A-08	90-72	N/A	N/A	4.1-01	Preservice replacement
	X		A	CUA-A-09	90-73	N/A	N/A	4.1-01	Preservice replacement
	х		A	CUA-A-11	90-74	N/A	N/A	4.1-01	Preservice replacement
	X		A	CUA-A-12	90-75	N/A	N/A	4.1-01	Preservice replacement
	x		A	CUA-A-15	90-76	N/A	N/A	4.1-01	Preservice replacement
	X		A	CUA-A-16	90-77	N/A	N/A	4.1-01	Preservice replacement
	Х		Α	CUA-A-17	90-78	N/A	N/A	4.1-01	Preservice replacement
	Х		A	CUA-A-18	90-79	N/A	N/A	4.1-01	Preservice replacement
	x		A	CUA-A-19	90-80	N/A	N/A	4.1-01	Preservice replacement
	x		A	CUA-A-20	90-165	N/A	N/A	4.1-01	Preservice replacement
'CUB'	x		A	CUB-A-01	90-81	N/A	N/A	4.1-02	Preservice replacement
	х		A	CUB-A-02	90-82	N/A	N/A	4.1-02	Preservice replacement
	х		A	CUB-A-03	90-83	N/A	N/A	4.1-02	Preservice replacement

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System or Component Description	A C <u>C</u>	R E J	Inspection Requirement	Weld or Component Description	UT Repo <u>No</u>	-	t Report	ISI ISO/Fig <u>No.</u>	Comments
	х		A	CUB-A-04	90-	84 N/A	N/A	4.1-02	Preservice replacement
	x		A	CUB-A-05	90-	85 N/A	N/A	4.1-02	Preservice replacement
	X		A	CUB-A-06	90-	86 N/A	N/A	4.1-02	Preservice replacement
	x		A	CUB-A-07	90-	85 N/A	N/A	4.1-02	Preservice replacement
	х		A	CUB-A-08	90-	86 N/A	N/A	4.1-02	Preservice replacement
	x		A	CUB-A-09	90-	87 N/A	N/A	4.1-02	Preservice replacement
	x		A	CUB-A-10	90-	88 N/A	N/A	4.1-02	Preservice replacement
	x		A	CUB-A-11	90-	89 N/A	N/A	4.1-02	Preservice replacement
	x		A	CUB-A-12	90-	90 N/A	N/A	4.1-02	Preservice replacement
	х		A	CUB-A-03A	90-	293 N/A	N/A	4.1-02	Preservice replacement
	х		. <b>A</b>	CUB-A-04A	90-	294 N/A	N/A	4.1-02	Preservice replacement
	х		A	CUB-A-07A	90-	295 N/A	N/A	4.1-02	Preservice replacement
'cuc'	x		A	CUC-A-01	90-	91 N/A	N/A	4.1-03	Preservice replacement
	X		A	CUC-A-02	90-	92 N/A	N/A	4.1-03	Preservice replacement
	x		A	CUC-A-03	90-	93 N/A	N/A	4.1-03	Preservice replacement
	X		A	CUC-A-05	90-	94 N/A	N/A	4.1-03	Preservice replacement

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System or Component Description	А С <u>С</u>	R E J	Inspection Requirement	Weld or Component Description	UI Repo <u>No</u>	_	Visual Report No.	PT Report No.	ISI ISO/Fig <u>No.</u>	Comments
	х		A	CUC-A-06	90-	-95	N/A	N/A	4.1-03	Preservice replacement
	x		A	CUC-A-07	90-	-96	N/A	N/A	4.1-03	Preservice replacement
	х		A	CUC-A-09	90-	-97	N/A	N/A	4.1-03	Preservice replacement
	x		A	CUC-A-11	90-	<b>-98</b>	N/A	N/A	4.1-03	Preservice replacement
	x		A	CUC-A-13	90-	-99	N/A	N/A	4.1-03	Preservice replacement
	х		A	CUC-A-14	90-	-100	N/A	N/A	4.1-03	Preservice replacement
	X		A	CUC-A-16	90-	-101	N/A	N/A	4.1-03	Preservice replacement
	X		A	CUC-A-17	90-	-102	N/A	N/A	4.1-03	Preservice replacement
	x		A	CUC-A-18	90-	-103	N/A	N/A	4.1-03	Preservice replacement
'DCB'	x		A	DCB-1	90-	-105	N/A	N/A	RWCU-1	This outage only
	x		A	DCB-2	90-	-113	N/A	N/A	RWCU-1	This outage only
	x		A	DCB-3	90-	-114	N/A	N/A	RWCU-1	This outage only
	Х		A	DCB-4	90-	-117	N/A	N/A	RWCU-1	This outage only
	x		A	DCB-5	90-	-118	N/A	N/A	RWCU-1	This outage only
	Х		A	DCB-6	90-	-121	N/A	N/A	RWCU-1	This outage only
	X		A	DCB-7	90-	-122	N/A	N/A	RWCU-1	This outage only

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X A DCB-8A 90-125 N/A N/A RWCU-1 This outage only X A DCB-8A 90-285 N/A N/A RWCU-1 This outage only X A DCB-9 90-126 N/A N/A RWCU-1 This outage only X A DCB-10 90-106 N/A N/A RWCU-1 This outage only X A DCB-11 90-109 N/A N/A RWCU-1 This outage only Y ECB' X A ECB-1 90-104 N/A N/A RWCU-1 This outage only X A ECB-1A 90-284 N/A N/A RWCU-1 This outage only X A ECB-2 90-112 N/A N/A RWCU-1 This outage only X A ECB-3 90-115 N/A N/A RWCU-1 This outage only X A ECB-3 90-115 N/A N/A RWCU-1 This outage only X A ECB-4 90-116 N/A N/A RWCU-1 This outage only	System or Component Description	A C <u>C</u>	<b>R</b> E <u>J</u>	Inspection Requirement	Weld or Component <u>Description</u>	UT Report <u>No.</u>	Visual Report <u>No.</u>	PT Report <u>No.</u>	ISI ISO/Fig <u>No.</u>	<u>Comments</u>
X A DCB-9 90-126 N/A N/A RWCU-1 This outage only X A DCB-10 90-106 N/A N/A RWCU-1 This outage only X A DCB-11 90-109 N/A N/A RWCU-1 This outage only Y ECB' X A ECB-1 90-104 N/A N/A RWCU-1 This outage only X A ECB-1A 90-284 N/A N/A RWCU-1 This outage only X A ECB-2 90-112 N/A N/A RWCU-1 This outage only X A ECB-3 90-115 N/A N/A RWCU-1 This outage only X A ECB-4 90-116 N/A N/A RWCU-1 This outage only		x		A	DCB-8	90-125	N/A	N/A	RWCU-1	This outage only
X A DCB-10 90-106 N/A N/A RWCU-1 This outage only X A DCB-11 90-109 N/A N/A RWCU-1 This outage only X A ECB-1 90-104 N/A N/A RWCU-1 This outage only X A ECB-1A 90-284 N/A N/A RWCU-1 This outage only X A ECB-2 90-112 N/A N/A RWCU-1 This outage only X A ECB-3 90-115 N/A N/A RWCU-1 This outage only X A ECB-3 90-116 N/A N/A RWCU-1 This outage only X A ECB-4 90-116 N/A N/A RWCU-1 This outage only		х		A	DCB-8A	90-285	N/A	N/A	RWCU-1	This outage only
X A DCB-11 90-109 N/A N/A RWCU-1 This outage only X A ECB-1 90-104 N/A N/A RWCU-1 This outage only X A ECB-1A 90-284 N/A N/A RWCU-1 This outage only X A ECB-2 90-112 N/A N/A RWCU-1 This outage only X A ECB-3 90-115 N/A N/A RWCU-1 This outage only X A ECB-4 90-116 N/A N/A RWCU-1 This outage only		х		A	DCB-9	90-126	N/A	N/A	RWCU-1	This outage only
'ECB' X A ECB-1A 90-104 N/A N/A RWCU-1 This outage only X A ECB-1A 90-112 N/A N/A RWCU-1 This outage only X A ECB-3 90-115 N/A N/A RWCU-1 This outage only X A ECB-3 90-115 N/A N/A RWCU-1 This outage only X A ECB-4 90-116 N/A N/A RWCU-1 This outage only		х		A	DCB-10	90-106	N/A	N/A	RWCU-1	This outage only
X A ECB-1A 90-284 N/A N/A RWCU-1 This outage only X A ECB-2 90-112 N/A N/A RWCU-1 This outage only X A ECB-3 90-115 N/A N/A RWCU-1 This outage only X A ECB-4 90-116 N/A N/A RWCU-1 This outage only		х		A	DCB-11	90-109	N/A	N/A	RWCU-1	This outage only
X A ECB-2 90-112 N/A N/A RWCU-1 This outage only X A ECB-3 90-115 N/A N/A RWCU-1 This outage only X A ECB-4 90-116 N/A N/A RWCU-1 This outage only	'ECB'	х		A	ECB-1	90-104	N/A	N/A	RWCU-1	This outage only
X A ECB-3 90-115 N/A N/A RWCU-1 This outage only X A ECB-4 90-116 N/A N/A RWCU-1 This outage only		X		A	ECB-1A	90-284	N/A	N/A	RWCU-1	This outage only
X A ECB-4 90-116 N/A N/A RWCU-1 This outage only		х		A	ECB-2	90-112	N/A	N/A	RWCU-1	This outage only
_		х		A	ECB-3	90-115	N/A	N/A	RWCU-1	This outage only
		х		A	ECB-4	90-116	N/A	N/A	RWCU-1	This outage only
X A ECB-5 90-119 N/A N/A RWCU-1 This outage only		х		Α .	ECB-5	90-119	N/A	N/A	RWCU-1	This outage only
X A ECB-6 90-120 N/A N/A RWCU-1 This outage only		х		Α	ECB-6	90-120	N/A	N/A	RWCU-1	This outage only
X A ECB-7 90-123 N/A N/A RWCU-1 This outage only		х		Α	ECB-7	90-123	N/A	N/A	RWCU-1	This outage only
X A ECB-8 90-124 N/A N/A RWCU-1 This outage only		х		A	ECB-8	90-124	N/A	N/A	RWCU-1	This outage only
X A ECB-9 90-127 N/A N/A RWCU-1 This outage only		х		A	ECB-9	90-127	N/A	N/A	RWCU-1	This outage only
X A ECB-10 90-107 N/A N/A RWCU-1 This outage only		x		A	ECB-10	90-107	N/A	N/A	RWCU-1	This outage only

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System or Component Description	A C <u>C</u>	R E <u>J</u>	Inspection Requirement	Weld or Component Description	UT Report No.	Visual Report No.	PT Report No.	ISI ISO/Fig <u>No.</u>	<u>Comments</u>
	x		A	ECB-11	90-108	N/A	N/A	RWCU-1	This outage only
	Х		A	ECB-12	90-110	N/A	N/A	RWCU-1	This outage only
	Х		Α	ECB-13	90-111	N/A	N/A	RWCU-1	This outage only
'1E-214 Intercon'	Х		A	INT-1	90-128	N/A	N/A	RWCU	
	Х		A	INT-2	90-139	N/A		RWCU	
	X		A	INT-3	90-149	N/A		RWCU	
	X		A	INT-4	90-150	N/A		RWCU	
	Х		A	INT-5	90 <b>-1</b> 51	N/A		RWCU	
	X		A	INT-6	90-152	N/A		RWCU	
	Х		A	INT-7	90-153	N/A		RWCU	
	Х		A	INT-8	90-154	N/A		RWCU	
	X		A	INT-9	9 <b>0-1</b> 55	N/A		RWCU	
	X		A	INT-10	90-129	N/A		RWCU	Replacement of elbow
	X		A	INT-11	90-130	N/A		RWCU	Replacement of elbow
	x		A	INT-12	90-131	N/A		RWCU	Replacement of elbow
	X		A	INT-13	90-132	N/A		RWCU	

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System or Component Description	A C <u>C</u>	R E J	Inspection Requirement	Weld or Component <u>Description</u>	UT Report No.	Visual Report No.	PT Report <u>No.</u>	ISI ISO/Fig No.	<u>Comments</u>
	х		A	INT-14	90-133	N/A		RWCU	
	x		A	INT-15	90-134	N/A		RWCU	
	х		A	INT-16	90-135	N/A		RWCU	
	x		A	INT-17 "	90-136	N/A		RWCU	
	х		A	INT-18	90-137	N/A		RWCU	
	x		A	INT-19	90-138	N/A		RWCU	
	x		A	INT-20	90-140	N/A		RWCU	
	х		A	INT-21	90-141	N/A		RWCU	
	х		A	INT-22	90-142	N/A		RWCU	
	х		A	INT-23	90-143	N/A		RWCU	
	х		A	INT-24	90-144	N/A		RWCU	
	х		A	INT-25	90-145	N/A		RWCU	
	X		A	INT-26	90-146	N/A		RWCU	
	х		A	INT-27	90-147	N/A		RWCU	
	х		A	INT-28	90-148	N/A		RWCU	
Refueling Bellows	x		D	Refueling Bellows	N/A	89-445		N/A	

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System or Component <u>Description</u>	A C <u>C</u>	R E J	Inspection Requirement	Weld or Component <u>Description</u>	UT Report No.	Visual Report No.	PT Report No.	ISI ISO/Fig No.	<u>Comments</u>
X-37c/38c Thickness at Penetration	х		D	X-38c/X-37c Plate	P90012	N/A		N/A	All points greater than NWT; 1.5"
Drywell Liner	x		D	A5A42A6AY1	P90013	N/A		N/A	From two feet around penet. X-37/38 (SW bundle) down to Drywell floor 746'-8" upper plate; all points greater than NWT, .75" lower plate; all points greater than NWT, 1.5"
Vent Line	х		D	217-6	P90016	N/A		N/A	All points > NWT = .375"
X-5E	x		D	217-A	P90017	N/A		N/A	All points > NWT = .375"
Drywell Liner	х		D	Azimuth 95	P90 <b>021</b>	N/A		N/A	Below drywell floor 746'-8" (1 ft down 2 feet wide). All points > NWT = 1.5"
	х		D	Azimuth 185	P90021	N/A		N/A	Below drywell floor (1 ft. down 2 ft. wide). All points > NWT = 1.5"
Vent Line Air Gaps X-5			D	X-5 vent lines (8)	P90018	N/A		N/A	XS5 - vent line leaking water at about 1/2 gallon per hour. UT thickness of vent performed
Drywell Liner	х	•	D	Drywell Linear Drains (4)	N/A	P90019		N/A	Drains at 0 , 90 , 180 , and 230 . No leakage found
Drains						•			thickness sat.

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A C <u>C</u>	R E J	Inspection Requirement	Weld or Component <u>Description</u>	UT Report No.	Visual Report No.	PT Report No.	ISI ISO/Fig <u>No.</u>	<u>Comments</u>
x		D	Sandpocket Drains	N/A	P90020		N/A	Drains at 5 , 95 , 185 , 275 . Drains at 95 and 185 saturated with
		Descripti	<u>on</u>					water. UT thickness at drywell shell
	<u>c</u>	С Е <u>С</u> <u>Ј</u>	C E Inspection C J Requirement X D	C E Inspection Component C J Requirement Description  X D Sandpocket	C E Inspection Component Report C J Requirement Description No.  X D Sandpocket N/A Drains	C E Inspection Component Report Report C J Requirement Description No. No.  X D Sandpocket N/A P90020 Drains	C E Inspection Component Report Report C J Requirement Description No. No. No.  X D Sandpocket N/A P90020 Drains	C E Inspection Component Report Report ISO/Fig C J Requirement Description No. No. No. No.  X D Sandpocket N/A P90020 N/A Drains

A	NUREG 0313 (Generic Letter 88-01)
В	NUREG 0619
С	IEB 80-13
D	IE Letter NG-87-4355 (Generic Letter 87-05)
E	GE SIL 465
F	GE SIL 289
G	GE SIL 474
H	GE RICSIL 045
I	NDE Pro. 1111.15
J	GE SIL 455
K	GE RICSIL 051 (VT-1)

<sup>\*</sup> Examination of augmented reactor pressure vessel (RPV) interior is in the document 1990 RFO GE in vessel inspection book.

ACC - Accept

- Reject REJ RPV

- Reactor Pressure Vessel

MIL - Mixer Inlet Lip RB - Riser Brace

ASS - Assembly

- Restrainer Set Screw RSS

T.S. - Thermal Sleeve IR - Inside Radius

RL- Refracted L Wave