

INGERSOLL-RAND

PUMPS

Engineered Pump Division

Ingersoll-Rand Company
942 Memorial Parkway
Phillipsburg, NJ 08865

September 22, 1988

Public Service Electric & Gas
Hope Creek Unit #2
Salem County
Salem, NJ

Attention: Manager, Quality Assurance
Nuclear Procurement Section

Reference: NRC Bulletin No. 88-05, Nonconforming Materials supplied by Piping Supplies Incorporated (PSI) at Folson, New Jersey and West Jersey Manufacturing Company (WJM) at Williamstown, New Jersey dated May 6, 1988.

Dear Sir:

In response to the above referenced bulletin concerning Piping Supplies, Inc. and West Jersey Manufacturing Company, Ingersoll-Rand has supplied .50"-300# R.F. Flanges, .75"-300# R.F. Flanges, and 1"-300# R.F. Flanges from West Jersey Manufacturing for four (4) Safety Auxillary Cooling System Pumps, Pump Serial Numbers 1278106, 1278107, 1278108, and 1278109, that were to be used at Hope Creek, Unit #2. The National Board Numbers of the pumps were 621, 686, 703, and 693 (copies of the NPV-1 forms are attached). A breakdown of the flanges is as follows:

.50"-300# R.F. Flanges - ASME SA105 material - Qty. 4 per pump - used in the Seal Piping - Heat Number 14E - MR#80-2537 (copy of the CMTR attached)

.75"-300# R.F. Flanges - ASME SA105 material - Qty. 2 per pump used in the Drain Piping - Heat Number A32 - MR# 80-2538 (copy of the CMTR attached)

1"-300# R.F. Flanges - ASME SA105 material - Qty. 2 per pump - used in the Vent Piping - Heat Number VR - MR# 80-2539 (copy of the CMTR attached)

(continued)

BB10060002 BB0922
PDR ADOCK 05000354
G PNU

TELL
11

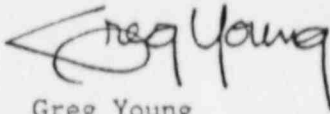
INGERSOLL-RAND
PUMPS

Engineered Pump Division
Ingersoll-Rand Company
942 Memorial Parkway
Phillipsburg, NJ 08865

-2-

If you have any questions concerning the above please feel free to call me at (201) 858-7603.

Yours truly,



Greg Young
Quality Control Engineer
Quality Control Department

cc: (with attach.)
U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

cc: (without attach.)
G. Bowen P. Nagengast J. Thompson
D. Jean K. Schumann
D. Cote R. Trimbath

attachment
NRCBulletin/jds

FORM NPV-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section III, Div. 1

1. Manufactured by Ingersoll-Rand Company, Engineered Pump Division, Phillipsburg, NJ 08865
(Name and Address of N Certificate Holder)
2. Manufactured for Bechtel Power Corporation, San Francisco, Calif. 94119
(Name and Address of Purchaser or Owner)
3. Location of Installation Hope Creek Unit #2, Salem County, NJ
(Name and Address)
4. Pump or Valve Pump Nominal Inlet Size 18" Outlet Size 14"
(inch) (inch)

	(a) Model No. or Type	(b) N Certificate Holder's Serial No.	(c) Canadian Registration No.	(d) Drawing No.	(e) Class	(f) Nat'l. Bd. No.	(g) Year Built
(1)	14X23S-h.r.	1278106	N/A	14X23S86X13D	3	621	1981
(2)							
(3)							
(4)							
(5)							
(6)							
(7)			N/A				
(8)							
(9)							
(10)							

5. Pump S/N 1278106; Safety Aux. Cooling System Pump
(Brief description of service for which equipment was designed)
I-R Order No. 006-36163-02 (Pump#1); Bechtel Order #10855-M-070 (Q)

6. Design Conditions 150 psi 95 °F or Valve Pressure Class N/A (1)
(Pressure) (Temperature)
7. Cold Working Pressure N/A psi at 100°F.
8. Pressure Retaining Pieces

Mark No.	Material Spec. No.	Manufacturer	Remarks
(a) Castings			
Casing, Lower	SA216WCB	I-R Fdy.	S/N 20A66
Casing, Upper	SA216WCB	I-R Fdy.	S/N 6A806
(b) Forgings			
.50" Pipe Plugs	SA182F304	Alloy Stainless Products Code #ATZ	
.75" Pipe Plugs	SA182F304	Alloy Stainless Prod Code #ARN	

(1) For manually operated valves only.

* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting			
1.00"X2.75" CapScrews	SA193Gr.B7	Vitco Nuclear	Code #T82; HT# 009216
.75"X4.50" Gland Studs	SA193Gr.B7	Kilbourn Engr.	Code #TK; HT# 76805
.75" Hex. Nuts	SA194Gr.2H	Vitco Nuclear	Code #CC; HT# 6064287
1.25"X3.00" CapScrews	SA193Gr.B7	Vitco Nuclear	Code #T49; HT #81086
	N/A		
(d) Other Parts			
Seal Gland	SA479Ty316	Durametallic/ Carpenter Technology	S/N 79P-11310 & S/N 79P-11312
	N/A		

9. Hydrostatic test 225 psi. Disk Differential test pressure N/A psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. I., Edition 1974
 Addenda Winter of 1975, Code Case No. 1739 Date Feb 1, 1981
 Signed Ingersoll-Rand Company, Engineered Pump Division D. W. Tath
(N Certificate Holder)
 Our ASME Certificate of Authorization No. N-1866 to use the N symbol expires Sept. 27, 1983
(N) (Date)

CERTIFICATION OF DESIGN

Design information on file at Bechtel Power Corporation, San Francisco, Calif. 94119
 Stress analysis report (Class 1 only) on file at N/A Class 3
 Design specifications certified by (1) Joseph Han
 PE State Calif. Reg. No. 14662
 Stress analysis certified by (1) N/A Class 3
 PE State N/A Reg. No. N/A
 (1) Signature not required. List name only.

CERTIFICATE OF SHOP 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 PA and employed by H.S.B.I. & I. Co. of Hartford, CT have inspected the pump, or valve, described in this Data Report on Feb 6 19 81, and state that to the best of my knowledge and belief, the N Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III.
 By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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 Feb 6 19 81
J. T. Green Commissions NB 7467
(Inspector) (N.B. Code Book 3rd Ed)

ENGINEERED PUMP DIVISION
ATTACHMENT FORM NPV-1 & N-2 & NF-1

MANUFACTURED BY: Ingersoll-Rand Company, Engineered Pump Division, Phillipsburg, NJ
 MANUFACTURED FOR: Bechtel Power Corp., San Francisco, Calif.
 OWNER: Public Service Electric & Gas, Newark, NJ
 LOCATION OF PLANT: Hope Creek Unit 2, Salem County, NJ
 I-R ORDER: 006-36168 (Pump #1) YEAR BUILT: 1981
 NAT'L. BD. NO.: 621 PUMP S/N: 1278106

DESCRIPTION	MATERIAL	MANUFACTURER
<u>Piping:</u>		
1"X1"X.50"X.50" Red. Cross	SA105	Std. Fittings Co., Code #2D3
.50" 90° Elbow	SA105	Std. Fittings Co., Code #2NT
.50"-300# R.F. Flange	SA105	West Jersey Manuf., Code #14E
.50"X2.75" Studs	SA193Gr.B7	Kilbourn Engr., Code #AAN
.50" Hex. Nuts	SA194Gr.2H	Vitco Nuclear, Code #AAA
1.00"-300# R.F. Flange	SA105	West Jefsey Manuf., Code #VR
.62"X3.50" Studs	SA193Gr.B7	Kilbourn Engr., Code #TK
.62" Hex. Nuts	SA194Gr.2H	Vitco Nuclear, Code #T70
1.00" Sch. 160 Pipe	SA106Gr.B	United States Steel HT# M63610
.50" Sch. 80 Pipe	SA106Gr.B	United States Steel HT# M60960
.75"-300# R.F. Flange	SA105	West Jersey Manuf. Code #A32
.75" 90° Elbow	SA105	Standard Fittings Co. Code #29I
.75" Sch. 160 Pipe	SA106Gr.B	Sharon Tube Co. HT# E71810

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

Date: Feb. 6 1981 Signed: Engineered Pump Division
Ingersoll-Rand Company By: Dub W. Teth

Certificate of Authorization No.: N-1866 Expires: Sept. 27, 1983

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of PA and employed by H.S.B.I. & I. Co. of Hartford, CT have inspected the equipment described in this Data Report on Feb-6 1981, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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: Feb. 6 1981

J. T. Green Commissions NB 7467
 (National Board, State, Province and No.)

FORM NPV-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section III, Div. 1

1. Manufactured by Ingersoll-Rand Company, Engineered Pump Division, Phillipsburg, NJ 08865
(Name and Address of N Certificate Holder)
2. Manufactured for Bechtel Power Corporation, San Francisco, CA 94119
(Name and Address of Purchaser or Owner)
3. Location of Installation Hope Creek Unit #2, Salem County, NJ
(Name and Address)
4. Pump or Valve Pump Nominal Inlet Size 18" Outlet Size 14"
(inch) (inch)

	(a) Model No. or Type	(b) N Certificate Holder's Serial No.	(c) Canadian Registration No.	(d) Drawing No.	(e) Class	(f) Nat'l. Bd. No.	(g) Year Built
(1)	14X23S-Hor.	1278107	N/A	14X23S86X13D	3	686	1981
(2)							
(3)							
(4)							
(5)							
(6)			N/A				
(7)							
(8)							
(9)							
(10)							

5. Pump S/N 1278107; Safety Aux. Cooling System Pump
(Brief description of service for which equipment was designed)
I-R Order No. 006-36168-02 (Pump #2); Bechtel Order #10855-M-070 (Q)

6. Design Conditions 150 psi 95 °F or Valve Pressure Class N/A (1)
(Pressure) (Temperature)
7. Cold Working Pressure N/A psi at 100°F.
8. Pressure Retaining Pieces

Mark No.	Material Spec. No.	Manufacturer	Remarks
(a) Castings			
Casing, Lower	SA216WCB	I-R Fdy.	S/N 21A60
Casing, Upper	SA216WCB	I-R Fdy.	S/N 6A820
(b) Forgings			
.50" Pipe Plugs	SA182F304	Alloy Stainless Products Code #ATZ	
.75" Pipe Plugs	SA182F304	Alloy Stainless Products Code #ARN	

(1) For manually operated valves only.
* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8-1/2" x 11", (2) information in items 1, 2 and 5 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting			
1.00"X2.75" Cap Screws	SA193Gr.B7	Vitco Nuclear	Code #T82; HT# 0092163
.75"X4.50" Gland Studs	SA193Gr.B7	Kilbourn Engr.	Code #TK; HT# 76805
.75" Hex. Nuts	SA194Gr.2H	Vitco Nuclear	Code #CC; HT# 6064287
1.25"X3.00" Cap Screws	SA193Gr.B7	Vitco Nuclear	Code #T49; HT# 81086
	N/A		
(d) Other Parts			
Seal Gland	SA479Ty316	Durametallic/ Carpenter Technology	S/N 79P-11305 & S/N 79P-11308
	N/A		

9. Hydrostatic test 225 psi. Disk Differential test pressure N/A psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. 1, Edition 1974
 Addenda Winter of 1975, Code Case No. 1739 Date May 19, 1981
 (Date)

Signed Ingersoll-Rand Company, Engineered Pump Division
 (N Certificate Holder)

Our ASME Certificate of Authorization No. N-1866 to use the N symbol expires Sept. 27, 1983
 (Date)

CERTIFICATION OF DESIGN

Design information on file at Bechtel Power Corporation, San Francisco, CA 94119
 Stress analysis report (Class 1 only) on file at N/A Class 3

Design specifications certified by (1) Joseph Han
 PE State CA Reg. No. 14662

Stress analysis certified by (1) N/A Class 3
 PE State N/A Reg. No. N/A

(1) Signature not required. List name only.

CERTIFICATE OF SHCP 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 PA and employed by H.S.B.I. & I. Co. of Hartford, CT have inspected the pump, or valve, described in this Data Report on 5-19-81, and state that to the best of my knowledge and belief, the N Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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 5-19-81
Lois M. Matman Commissions NB 8373
 (Inspector) (Natl Bd. State, Prov. and No.)

CH 5/19/81
R-MS-19-81

ENGINEERED PUMP DIVISION
ATTACHMENT FORM (NPV-1) & N-2 & NF-1

MANUFACTURED BY: Ingersoll-Rand Company, Engineered Pump Division, Phillipsburg, NJ
MANUFACTURED FOR: Bechtel Power Corporation, San Francisco, CA
OWNER: Public Service Electric & Gas, Newark, NJ
LOCATION OF PLANT: Hope Creek Unit 2, Salem County, NJ
I-R ORDER: 006-36168 (Pump #2) YEAR BUILT 1981
NAT'L. BD. NO.: 686 PUMP S/N: 1278107

DESCRIPTION	MATERIAL	MANUFACTURER
1"X1"X.50"X.50 Red Cross*	SA105	Std. Fittings Co., Code #2D3
.50" 90° Elbow	SA105	Std. Fittings Co., Code #2NT
.50"-300# R.F. Flange	SA105	West Jersey Manuf., Code #14E
.50"X2.75" Studs	SA193Gr.B7	Kilbourn Engr., Code #AAN
.50" Hex. Nuts	SA194Gr.2H	Vitco Nuclear, Code #AAA
1.00"-300# R.F. Flange	SA105	West Jersey Manuf., Code #VR
.62"X3.50" Studs	SA193Gr.B7	Kilbourn Engr., Code #TK
.62" Hex. Nuts	SA194Gr.2H	Vitco Nuclear, Code #T70
1.00" Sch. 160 Pipe	SA106Gr.B	United States Steel HT# M63610
.50" Sch. 80 Pipe	SA106Gr.B	United States Steel HT# M60960
.75"-300# R.F. Flange	SA105	West Jersey Manuf. Code #A32
.75" 90° Elbow	SA105	Standard Fittings Co. Code #29I
.75" Sch 160 Pipe	SA106Gr.B	Sharon Tube Co. HT# E71810*

CH 5/19/81
R-MS-19-81

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

Date: May 19 1981 Signed: Engineered Pump Division
Ingersoll-Rand Company By: [Signature]

Certificate of Authorization No.: N-1866 Expires: Sept. 27, 1983

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of PA and employed by H.S.B.I. & I. Co. of Hartford, CT have inspected the equipment described in this Data Report on 5-19-1981, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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: 5-19-1981
[Signature] Commissions NB 8373
(National Board, State, Province and No.)

FORM NPV-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR PUMPS OR VALVES*
As Required by the Provisions of the ASME Code, Section III, Div. 1

1. Manufactured by Ingersoll-Rand Company, Engineered Pump Division, Phillipsburg, NJ 08865
(Name and Address of N Certificate Holder)
2. Manufactured for Bechtel Power Corporation, San Francisco, CA 94119
(Name and Address of Purchaser or Owner)
3. Location of Installation Hope Creek Unit #2, Salem County, NJ
(Name and Address)
4. Pump or Valve Pump Nominal Inlet Size 18" Outlet Size 14"
(inch) (inch)

	(a) Model No. or Type	(b) N Certificate Holder's Serial No.	(c) Canadian Registration No.	(d) Drawing No.	(e) Class	(f) Nat'l. Bd. No.	(g) Year Built
	(1)	14X23S Hor.	1278108	N/A	14X23S86X13D	3	703
(2)							
(3)							
(4)							
(5)							
(6)			N/A				
(7)							
(8)							
(9)							
(10)							

5. Pump S/N 1278108: Safety Aux. Cooling System Pump
(Brief description of service for which equipment was designed)
I-R Order No. 006-36168-02 (Pump #3): Bechtel Order #10855-M-070 (Q)

6. Design Conditions 150 psi 95 °F or Valve Pressure Class N/A (1)
(Pressure) (Temperature)
7. Cold Working Pressure N/A psi at 100°F.
8. Pressure Retaining Pieces

Mark No.	Material Spec. No.	Manufacturer	Remarks
(a) Castings			
Casing, Lower	SA216WCB	I-R Fdy.	S/N 16A83
Casing, Upper	SA216WCB	I-R Fdy.	S/N 44022
(b) Forgings			
.50" Pipe Plugs	SA182F304	Alloy Stainless Products Code #ATZ	
.50" Pipe Plugs	SA182F304	Alloy Stainless Products Code #BEB	

(1) For manually operated valves only.
* Supplemental sheets in form of lists, sketches or drawings may be used provided (1) size is 8 1/2" x 11", (2) information in items 1, 2 and 5 on this Data Report is included on each sheet, and (3) each sheet is numbered and number of sheets is recorded at top of this form.

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting			
1.00"X2.75" Cap Screws	SA193Gr.B7	Vitco Nuclear	Code #T82; HT# 0092163 *
.75"X4.50" Gland Studs	SA193Gr.B7	Kilbourn Engr.	Code #TK; HT# 76805
.75" Hex Nuts	SA194Gr.2H	Vitco Nuclear	Code #CC; HT# 6064287
1.25"X3.00" Cap Screws	SA193Gr.B7	Vitco Nuclear	Code #T49; HT# 81086
	N/A		
(d) Other Parts			
Seal Gland	SA479Ty316	Durametallic/ Carpenter Technology	S/N 79P-11309 S/N 79P-11311 *
	N/A		

9. Hydrostatic test 225 psi. Disk Differential test pressure N/A psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components, Section III, Div. 1, Edition 1974
 Addenda Winter of 1975, Code Case No. 1739-2 Date July 14, 1981
 Signed Ingersoll-Rand Company, Engineered Pump Division *[Signature]*
(N Certificate Holder)
 Our ASME Certificate of Authorization No. N-1866 to use the N symbol expires Sept. 27, 1983
(Date)

CERTIFICATION OF DESIGN

Design information on file at Bechtel Power Corporation, San Francisco, CA 94119
 Stress analysis report (Class 1 only) on file at N/A Class 3
 Design specifications certified by (1) Joseph Han
 PE State CA Reg. No. 14662
 Stress analysis certified by (1) N/A Class 3
 PE State N/A Reg. No. N/A
(1) Signature not required. List name only.

CERTIFICATE OF SHOP 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 PA and employed by H.S.B.I. & I. Co. of Hartford, CT have inspected the pump, or valve, described in this Data Report on July 14 1981, and state that to the best of my knowledge and belief, the N Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III.
 By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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 July 14 1981
[Signature] Commissions NB 7467

CAMERON PUMP DIVISION
ATTACHMENT FORM (NPV-1 & N-2 & NF-1)

MANUFACTURED BY: Ingersoll-Rand Company, Engineered Pump Division, Phillipsburg, NJ
 MANUFACTURED FOR: Bechtel Power Corporation, San Francisco, CA
 OWNER: Public Service Electric & Gas, Newark, NJ
 LOCATION OF PLANT: Hope Creek Unit 2, Salem County, NJ
 I-R ORDER: 006-36168 (Pump #3) YEAR BUILT: 1981
 NAT'L. BD. NO.: 703 PUMP S/N: 1278108

DESCRIPTION	MATERIAL	MANUFACTURER
1"X1"X.50"X.50 Red Cross	SA105	Std. Fittings Co., Code #2D3
.50" 90° Elbow	SA105	Std. Fittings Co., Code #2NT
.50"-300# R.F. Flange	SA105	West Jersey Manuf., Code #14E
.50"X2.75" Studs	SA193Gr.B7	Kilbourn Engr., Code #AAN
.50" Hex. Nuts	SA194Gr.2H	Vitco Nuclear, Code #AAA
1.00"-300# R.F. Flange	SA105	West Jersey Manuf., Code #VR
.62"X3.50" Studs	SA193Gr.B7	Kilbourn Engr., Code #TK
.62" Hex. Nuts	SA194Gr.2H	Vitco Nuclear, Code #T70
1.00" Sch. 160 Pipe	SA106Gr.B	United States Steel HT# M63610
.50" Sch. 80 Pipe	SA106Gr.B	Sharon Tube Co., HT# D84656
.75"-300# R.F. Flange	SA105	West Jersey Manuf. Code #A32
.75" 90° Elbow	SA105	Standard Fittings Co. Code #29I
.75" Sch. 160 Pipe	SA106Gr.B	Sharon Tube Co. HT# E88355

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

Date: July 14 1981 Signed: Engineered Pump Division
Ingersoll-Rand Company By: [Signature]
 Certificate of Authorization No.: N-1866 Expires: Sept. 27, 1983

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of PA and employed by H.S.B.I. & I. Co. of Hartford, CT have inspected the equipment described in this Data Report on July 14 1981, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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: July 14 1981
J. T. Green Commissions NB7467
 (National Board, State, Province and No.)

Mark No.	Material Spec. No.	Manufacturer	Remarks
(c) Bolting			
1.00"X2.75" Cap Screws	SA193Gr.B7	Vitco Nuclear	Code #T82; HT# 00921
.75"X4.50" Gland Studs	SA193Gr.B7	Kilbourn Engr.	Code #TK; HT# 76805
.75" Hex. Nuts	SA194Gr.2H	Vitco Nuclear	Code #CC; HT# 6064287
1.25"X3.00" Cap Screws	SA193Gr.B7	Vitco Nuclear	Code #T49; HT# 81086
/			
N/A			
(d) Other Parts			
Seal Gland	SA479Ty316	Durametallic/ Carpenter Technology	S/N 79P-11306 S/N 79P-11307
/			
N/A			

9. Hydrostatic test 225 psi. Disk Differential test pressure N/A psi.

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that this pump, or valve, conforms to the rules of construction of the ASME Code for Nuclear Power Plant Components. Section III, Div. 1, Edition 1974
 Addenda Winter of 1975 (Date), Code Case No. 1739-2, Date June 25, 1981
 Signed Ingersoll-Rand Company, Engineered Pump Division
 (N Certificate Holder)
 Our ASME Certificate of Authorization No. N-1866 to use the N (N) symbol expires Sept. 27, 1983 (Date)

CERTIFICATION OF DESIGN

Design information on file at Bechtel Power Corporation, San Francisco, CA 94119
 Stress analysis report (Class 1 only) on file at N/A Class 3
 Design specifications certified by (1) Joseph Han
 PE State CA Reg. No. 14662
 Stress analysis certified by (1) N/A Class 3
 PE State N/A Reg. No. N/A
 (1) Signature not required. List name only.

CERTIFICATE OF SHCP 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 PA and employed by H.S.B.I. & I. Co.
 of Hartford, CT have inspected the pump, or valve, described in this Data Report on June 25 19 81, and state that to the best of my knowledge and belief, the N Certificate Holder has constructed this pump, or valve, in accordance with the ASME Code, Section III.
 By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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 June 25 19 81
J. T. Queen (Inspector) Commissions NB7467
 (N.B. No. State, Prov. and No.)

ENGINEERED PUMP DIVISION
ATTACHMENT FORM (NPV-1) & N-2 & NF-1

MANUFACTURED BY: Ingersoll-Rand Company, Engineered Pump Division, Phillipsburg, NJ
 MANUFACTURED FOR: Bechtel Power Corporation, San Francisco, CA
 OWNER: Public Service Electric & Gas, Newark, NJ
 LOCATION OF PLANT: Hope Creek Unit 2, Salem County, NJ
 I-R ORDER: 006-36168 (Pump #4) YEAR BUILT: 1981
 NAT'L. BD. NO.: 693 PUMP S/N: 1278109

<u>DESCRIPTION</u>	<u>MATERIAL</u>	<u>MANUFACTURER</u>
1"X1"X.50"X.50 Red Cross	SA105	Std. Fittings Co., Code #2D3
.50" 90° Elbow	SA105	Std. Fittings Co., Code #2NT
.50"-300# R.F. Flange	SA105	West Jersey Manuf., Code #14E
.50"X2.75" Studs	SA193Gr.B7	Kilbourn Engr., Code #AAN
.50" Hex. Nuts	SA194Gr.2H	Vitco Nuclear, Code #AAA (15 pcs)
.50" Hex. Nut	SA194Gr.2H	Vitco Nuclear, Code #X14 (1 pc)
1.00"-300# R. F. Flange	SA105	West Jersey Manuf., Code #VR
.62"X3.50" Studs	SA193Gr.B7	Kilbourn Engr., Code #TK
.62" Hex. Nuts	SA194Gr.2H	Vitco Nuclear, Code #T70 (5 pcs)
.62 Hex Nuts	SA194Gr.2H	Vitco Nuclear, Code #X15 (3 pcs)
1.00" Sch. 160 Pipe	SA106Gr.B	United States Steel HT# M63610
.50" Sch. 80 Pipe	SA106Gr.B	Sharon Tube Co., HT# D84656
.75"-300# R.F. Flange	SA105	West Jersey Manuf. Code #A32
.75" 90° Elbow	SA105	Standard Fittings Co. Code #29I
.75" Sch 160 Pipe	SA106Gr.B	Sharon Tube Co. HT# E88855

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

Date: June 25 1981 Signed: Engineered Pump Division
Ingersoll-Rand Company

By: [Signature]

Certificate of Authorization No.: N-1866 Expires: Sept. 27, 1983

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of PA and employed by H.S.B.I. & I. Co. of Hartford, CT have inspected the equipment described in this Data Report on June 25 1981, and state that to the best of my knowledge and belief, the Manufacturer has constructed this equipment in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the equipment described in this 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: June 25 1981

[Signature]

Commissions

NB7467
 (National Board, State, Province and No.)



WEST JERSEY MANUFACTURING CO.

P. O. Box W
Williamstown, N.J. 08094

(609) 620-4775

INV. NO. 5932

SOLD TO
Ingersoll-Rank Company
Cameron Pump Division
PO Box 496
Phillipsburg, NJ 08865

SHIP TO

Same as "Sold To" unless otherwise indicated

Same

Customer Order No. C534492R
Invoice Date 4/30/80

Quan. Ordered	Quan. Shipped	DESCRIPTION	MATERIAL CERTIFICATION
16	16	ASME SA105 SECTION III, CLASS 3 1/2" 300# RF SW Std Heat 14E 02 Flanges 50534 204350 Cameron BOAR-X-1 PADM 735-5 Flange	<p>West Jersey Manufacturing Co. hereby certifies that to the best of knowledge and belief the product furnished is in accordance with applicable specification and has been manufactured from material that has been subjected to the metallurgical tests specified.</p> <p>PARAGRAPH P-1 (ALL) OF SECTION I AND PARAGRAPH UG-11 (ALL) OF SECTION VIII OF THE ASME BOILER AND PRESSURE VESSEL CODE STATE THAT FOR PIPE FITTINGS MARKED WITH THE MANUFACTURER'S NAME OR TRADE MARK AND SUCH OTHER MARKINGS AS ARE REQUIRED BY THE APPLICABLE STANDARDS, SUCH MARKINGS SHALL BE CONSIDERED AS THE MANUFACTURER'S CERTIFICATION THAT THE PRODUCT COMPLIES WITH THE MATERIAL SPECIFICATIONS AND STANDARDS INDICATED. FURTHERMORE, CERTIFICATION THAT THE MATERIAL CONFORMS TO THE REQUIREMENTS OF THE SPECIFICATION IS A PERMISSIVE PROCEDURE UNDER EACH OF THE ASME STANDARD SPECIFICATIONS SUMMARIZED BELOW.</p>

WE CERTIFY THE MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED, TESTED, AND MARKED IN ACCORDANCE WITH AND MEETS ALL REQUIREMENTS OF APPLICABLE SPECIFICATIONS. THIS MATERIAL IS FURNISHED IN ACCORDANCE WITH WEST JERSEY MFG. CO. QUALITY ASSURANCE PROGRAM DESCRIBED IN WJ QUALITY SYSTEMS MANUAL AND APPROVED BY ASME QUALITY SYSTEMS CERTIFICATE (CERTIFICATE NO. 601-288 EXPIRING 11/30/82).

SECTION	SA-105	SA-105	SA-105	SA-105	SA-105	SA-105	SA-105	SA-105	SA-105
TESTED									

RELEASED

DATE MAY 23 1980

VERIFIED *[Signature]*

Betty Tartaglia
WEST JERSEY MANUFACTURING CO

MFD
C-534492R
28837

WEST JERSEY MANUFACTURING CO.
Williamstown, N.J.

DATE April 30 1980

MR 80-253

OUR ORDER NUMBER 5992 CUSTOMER'S ORDER NUMBER C534492R

ASME Boiler and Pressure Vessel Code Sec. III
Div. 1, 1974 Edition, WINTER 1975 Addenda CI. 3 EX105
Ingersoll-Rand Company

HEAT NO.	CHEMICAL ANALYSIS								ITEM	TENSILE STRENGTH, P.S.I.	YIELD POINT, P.S.I.	ELONGATION, % 2"	% REDUCTION OF AREA	TESTOR CODE NO.	REPRESENTS
	C	Mn	P	S	Si	Cr	Ni	Mo							
14E	.23	.82	.005	.015	.19				1	71,200	47,800	38.2	74.1	14E	16-1/2" 3008 RF SM Std. bore 02 flanges 50534 204250/cameron 80A8-X-1 PARM 785-5 fly. 10 CR 21 requirements Items in further list attached. Order are for use in reactor safety related components subject to repair, replacement pursuant to Sect. 206 of the Energy Reformation Act of 1974 as implemented by 15 CFR 11.1000 of any defects by vendor pursuant to such list shall be immediately made to our plant or Jobsite Quality Assurance Manager with copy to our Director of Quality Assurance at P. O. Box W, Williamstown, N.J. 08094
<p>RELEASED</p> <p>DATE _____</p> <p>VERIFIED <i>D. H. [Signature]</i> C. [Signature] Div.</p>										<p>WE CERTIFY THE MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED, TESTED, AND EXAMINED IN ACCORDANCE WITH AND MEETS ALL REQUIREMENTS OF REFERENCED SPECIFICATIONS. THIS MATERIAL WAS PRODUCED IN ACCORDANCE WITH WEST JERSEY MFG. CO. QUALITY ASSURANCE PROGRAM DESCRIBED IN WJ QUALITY SYSTEMS MANUAL AN ACCEPTED BY ASME QUALITY CENTER CERTIFICATE (MATERIALS) NO. CQC 308 EXPIRING 11/30/82.</p>					

WEST JERSEY MANUFACTURING CO.

John Marino



WEST JERSEY MANUFACTURING CO.

P. O. Box W
Williamstown, N.J. 08094

(609) 629-4776

INV. NO. 5993

S
O
L
D

T
O

Ingersoll-Rand Company
Cameron Pump Div.
P.O. Box 495
Phillipsburg, N.J. 08865

S
H
I
P

T
O

Some as 'Sold's' unless otherwise indicated

SAVE

MR
SO # 2538

Order Order No. / Invoice Date
534488R / 4/30/80

QTY.	Quan. Shipped	DESCRIPTION
8		ASME SA105 Section III, Class 3 3/4" 304 ST SW END. Heat A22 02 Flanges 50224 204250/Cameron SCAS-X-2 PARM "12-5

MATERIAL CERTIFICATION

West Jersey Manufacturing Co. hereby certifies that to the best of our knowledge and belief the product furnished is in accordance with the applicable specification and has been manufactured from material that has been subjected to the metallurgical tests specified.

PARAGRAPH P1 (A)(1) OF SECTION I AND PARAGRAPH UG-11 (A)(1) OF SECTION VIII OF THE ASME BOILER AND PRESSURE VESSEL CODE STATE THAT FOR PIPE FITTINGS MARKED WITH THE MANUFACTURER'S NAME OR TRADE MARK AND SUCH OTHER MARKINGS AS ARE REQUIRED BY THE APPLICABLE STANDARDS, SUCH MARKINGS SHALL BE CONSIDERED AS THE MANUFACTURER'S CERTIFICATION THAT THE PRODUCT COMPLIES WITH THE MATERIAL SPECIFICATIONS AND STANDARDS INDICATED. FURTHERMORE, CERTIFICATION THAT THE MATERIAL CONFORMS TO THE REQUIREMENTS OF THE SPECIFICATION IS A PERMISSIVE PROCEDURE UNDER EACH OF THE ASTM STANDARD SPECIFICATIONS SUMMARIZED BELOW

WE CERTIFY THE MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED, TESTED, AND EXAMINED IN ACCORDANCE WITH AND MEETS ALL REQUIREMENTS OF REFERENCED SPECIFICATIONS. THIS MATERIAL WAS PRODUCED IN ACCORDANCE WITH WEST JERSEY MFG. CO. QUALITY ASSURANCE PROGRAM DESCRIBED IN WJ QUALITY SYSTEMS MANUAL AS ACCEPTED BY ASME QUALITY SYSTEM CERTIFICATE (MATERIAL) QSC-355 EXPIRING 11/30/80.

TEST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PLATE TESTS AND TENSILE TESTS																					

RELEASED
MAY 27 1980

DATE _____
VERIFIED _____

J. J. ...
WEST JERSEY MANUFACTURING CO.

WEST JERSEY MANUFACTURING CO.

Williamstown, N.J.

DATE April 30 1950

OUR ORDER NUMBER 5993

MR 80 # 2538

CUSTOMER'S ORDER NUMBER

WEST RECORDS
 Div. 1, 1974 Edition, HIGHER 1975 REGULATION CA. J. SALES DEPT.
 ACEE Boiler and Pressure Vessel Code Sec. III
 Ingersoll-Rand Company

ITEM	CHEMICAL ANALYSIS							TENSILE STRENGTH, P.S.I.	YIELD POINT, P.S.I.	ELONGATION, %	REDUCTION OF AREA, %	TEST ROOM CODE NO.	REMARKS
	C	Mn	P	S	Si	Cr	Ni						
A32	.33	.80	.016	.027	.38			42,000	28	54	A32	6-3/4" 300# FT SW STD. HOT	
RECEIVED DATE _____ VERIFIED _____ O.C. Cameron													
WE CERTIFY THE MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED TO THE REQUIREMENTS OF REFERENCED CODE AND MEETS ALL REQUIREMENTS OF REFERENCED SPECIFICATIONS. THIS MATERIAL WAS PRODUCED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM PROVIDED TO THE QUALITY CONTROL MATERIALS AS ACCEPTED BY THE QUALITY CONTROL CERTIFICATE (MATERIALS) NO. 02 383 EXPIRING 11/30/52.													
10 CFR 21 Requirements Tests and tests in this certificate are for use in this law liability of the components subject to these requirements pursuant to the Act of the President of the United States. Any other tests or tests shall be immediately referred to the Director of Quality Assurance at U. S. Box W, Washington, N. J. 07094													

WEST JERSEY MANUFACTURING CO.

Gene Flannery



WEST JERSEY MANUFACTURING CO.

P. O. Box W
Williamstown, N.J. 08094

(609) 529-4776

INV. NO. 6139

SOLD TO
Ingersoll-Rand Company
Cameron Pump Div.
P.O. Box 495
Phillipsburg, N.J. 08865

Same as last's manufacturer's material
S
H
I
P
I
O
SAME

Customer Order No
C534495R
Invoice Date
4. 21 '82

Quan. Ordered	Quan. Shipped	DESCRIPTION	MATERIAL CERTIFICATION
12	12	ASME SA119 Sec. III Class 3 1" 3004 RT SW Std. Heat VR 02 Flanges 50834 204250 Cameron 80A1-T-3 2 INCH 715-5	<p>West Jersey Manufacturing Co. hereby certifies that to the best of our knowledge and belief the product furnished is in accordance with the applicable specification and has been manufactured from material that has been subjected to the metallurgical tests specified.</p> <p>PARAGRAPH F1 A.1 OF SECTION 1 AND PARAGRAPH UG-11 (A11) OF SECTION VIII OF THE ASME BOILER AND PRESSURE VESSEL CODE STATE THAT FOR PIPE FITTINGS MARKED WITH THE MANUFACTURERS NAME OR TRADE MARK AND SUCH OTHER MARKINGS AS ARE REQUIRED BY THE APPLICABLE STANDARDS SUCH MARKINGS SHALL BE CONSIDERED AS THE MANUFACTURERS CERTIFICATION THAT THE PRODUCT COMPLIES WITH THE MATERIAL SPECIFICATIONS AND STANDARDS INDICATED. FURTHERMORE, CERTIFICATION THAT THE MATERIAL CONFORMS TO THE REQUIREMENTS OF THE SPECIFICATION IS A PERMISSIBLE PROCEDURE UNDER EACH OF THE ASTM STANDARD SPECIFICATIONS SUMMARIZED BELOW:</p>

WE CERTIFY THE MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED, TESTED, AND EXAMINED IN ACCORDANCE WITH AND MEETS ALL REQUIREMENTS OF REFERENCED SPECIFICATIONS. THIS MATERIAL WAS PRODUCED IN ACCORDANCE WITH WEST JERSEY MFG. CO. QUALITY ASSURANCE PROGRAM DESCRIBED IN A QUALITY SYSTEMS MANUAL AS ACCEPTED BY ASME QUALITY SYSTEMS CERTIFICATE (MATERIALS) NO. 800-385 EXPIRES 12/30/82.

RELEASED

DATE 11-23-1980

VERIFIED [Signature]

DATE	TIME	BY	REMARKS

[Signature]
WEST JERSEY MANUFACTURING CO.

MR 80423085

WEST JERSEY MANUFACTURING CO.
Williamstown, N.J.

MR 80#2539

DATE April 30 1980

OUR ORDER NUMBER 6030

CUSTOMER'S ORDER NUMBER 6534495R

TEST RECORD OF ASME Boiler and Pressure Vessel Code Sec. III, Div. 1, 1974 Edition, Winter 1975 Addenda Cl. 3 SA105 FURNISHED Ingersoll-Rand Company

ITEM	CHEMICAL ANALYSIS					ITEM	SPECIFIED TENSILE STRENGTH	RECEIVED TENSILE STRENGTH	ELONGATION	REDUCED SECTION	TENSILE	REPRESENTATIVE
	C	Mn	P	S	SI							
VR	.31	.85	.011	.021	.24	1	61,700	49,700	30.0	55	VR	12-1" JOBS BY SW
												03-Flange-50534,
												204250/cameron
												00A0-X-3-PART-703-5

RELEASED

DATE

VERIFIED

10 CFR 21 Requirements

Items set forth in this Purchase Order are for use in Nuclear Safety-related Components subject to reporting requirements pursuant to Section 161 of the Energy Reorganization Act of 1974 as implemented by 10 CFR 21. Notice of any defects by the purchaser shall be given to the manufacturer within 10 days of receipt of the material to our plant or to the Director of Quality Assurance at P. O. Box W, Williamstown, N.J. 08094

WE CERTIFY THE MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED, TESTED, AND FINISHED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS REFERENCED AND APPROVED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM AND IS IN FULL COMPLIANCE WITH THE QUALITY SYSTEM CERTIFICATE (MATERIALS) NO. 11/30/82.

WEST JERSEY MANUFACTURING CO. 11/30/82.