

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by Hebeler Vicksburg Corp., 102-105 Vicksburg Harbor Ind. Park, Vicksburg, MS 39180
(Name and address of Manufacturer)

2. Manufactured for APV Crepaco Inc., 395 Fillmore Ave., Tonawanda, NY 14150
(Name and address of Purchaser)

3. Location of installation Borden Chemicals & Plastics, Geismar, LA
(Name and address)

4. Type Horizontal Ammonia Water Drum V0078
(Horizontal, vertical, or spherical) (Tank, separator, etc. vessel, heat exch., etc.) (Mfg's serial No.)
--- D-V0417/4.27125.6203 69 1993
(ICR) (Drawing No.) (Nett. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 1992 Edition, 1992 Addenda
(Section and Addenda dates) Code Case No. Special Service per UG-120(d)

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, shell of heat exchangers, or chamber of multi-chamber vessels.

6. Shell (a) No. of courses: 1 (b) Overall length (ft & in.): 8 Ft.

Course(s)			Material	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No.	Diameter, in.	Length (ft & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full Spot. None	Eff.	Type	Full Spot. None	Eff.	Temp.	Time
1	60" OD	8 Ft.	SA240 304L	.187	0.0	1	None	70	1	None	70	- -	- -

7. Heads: (a) SA240 304L (b) ---
(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp. (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp.

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full. Spot. None	Eff.
(a)	Ends	.125	0.0	---	---	2:1	---	---	---		Concave	S	None	70
(b)														

If removable, bolts used (describe other fastening): ---
(Mat'l Spec. No., Grade, size, No.)

8. Type of jacket --- Jacket closure ---
(Describe as open & weld, bar, etc.)

If bar, give dimensions 15 --- per at max. temp. 250 --- °F Min. design metal temp. -20 --- °F at 15 psi.
(width) (thickness) (weight)

10. Impact test No - Impact Exempt per UHA-51(a)
(Indicate yes or no and the complementary impact tested)

11. Hydro pneu. or comb. test press. 24 psig Proof test ---

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: --- --- --- --- ---
(Summary (Mat'l Spec. No.)) (Dia. in. subject to press.) (Nom. dia. in.) (Corr. Allow. in.) Attachment (welded or bolted)
--- --- --- --- ---
(Flange (Mat'l Spec. No.)) (Dia. in.) (Nom. dia. in.) (Corr. Allow. in.) Attachment

13. Tubes: --- --- --- --- ---
(Mat'l Spec. No., Grade or Type) (O.D. in.) (Nom. dia. in. or gauge) (Number) (Type (Straight or U))

Items 14-18 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

14. Shell (a) No. of courses: --- (b) Overall length (ft & in.): ---

Course(s)			Material	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B, & C)			Heat Treatment	
No.	Diameter, in.	Length (ft. & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
		-- --		-- --			-- --			-- -- --			
		-- --		-- --			-- -- --			-- -- --			
		-- --		-- --			-- -- --			-- -- --			

15. Heads: (a) --- (b) ---
(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp. (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp.

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full. Spot. None	Eff.
(a)	---												---	
(b)	---												---	

If removable, bolts used (describe other fastening): ---
(Mat'l Spec. No., Grade, size, No.)

FORM U-1 (Back)

SERIAL NO. V0078

16. MAWP psi at max. temp. °F. Min. design metal temp. °F at psi.
(internal) (external) (internal) (external)
17. Impact test
(Indicate yes or no and the component(s) impact tested)
18. Hydro., pneu., or comb. test press. Proof test
19. Nozzles, inspection, and safety valve openings: 8-27-93

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Manway	1	24"	W.E.	SA240304L	SA51670	.250	0.0	Inherent	Welded	Welded	Head
Inlet	1	1"	CPLG	SA182304L	- -	3000#	0.0	Inherent	Welded	- -	Shell
Inlet	1	1-1/2"	50RFSO	SA312304L	SA182304L	.145	0.0	Inherent	Welded	Welded	Shell
Inlet/Outlet	5	2"	50RFSO	SA312304L	SA182304L	.154	0.0	Inherent	Welded	Welded	Shell
Outlet	2	2"	50RFSO	SA312304L	SA182304L	.154	0.0	Inherent	Welded	Welded	Head
Outlet	2	3"	50RFSO	SA312304L	SA182304L	.216	0.0	Inherent	Welded	Welded	Shell
Inlet	1	4"	150LJ	SA312304L	SA105	.280	0.0	Inherent	Welded	Lap Joint	Shell

20. Supports: Skirt No Lugs - - Legs - - Others Saddles Attached Shell/Welded
(Yes or no) (No.) (No.) (Describe) (Where and how)

21. Manufacturer's Partial Data Reports properly identified and signed by Commissioned inspectors have been furnished for the following items of the report:

(List the name of part, item number, mfg's. name and identifying number)

Nozzle & Cover, H1960, Hebel Corporation #1, U-Stamp No. 8988

Nozzles, H1958, H1959, Hebel Corporation #1, U-Stamp No. 8988

22. Remarks: Pressure Relief Device By Owner/User.

Hydro Tested in the Horizontal Position

This Vessel is not intended for lethal service.

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

U Certificate of Authorization No. 25,223 Expires Nov. 15, 19 93

Date 8-27-93 Name Hebel Vicksborg Corp. Signed Donald E. Maye
(Manufacturer) (Representative)

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 or Province of Miss. and employed by H.S.B.I. & I. Co. of Hartford, CT have inspected the pressure vessel described in this Manufacturer's Data Report on 8/27, 19 93, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 8/27/93 Signed B. Q. O'Neil Commissions NB7774 "A" MS 35
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements on this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME Code, Section VIII, Division 1.

U Certificate of Authorization No. Expires , 19

Date Name Signed
(Assembler) (Representative)

CERTIFICATE OF FIELD ASSEMBLY 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 and employed by of have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items , not included in the certificate of shop inspection, have been inspected by me and to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of psi. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Signed Commissions
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1 NB 69 7/4

1. Manufactured and certified by Hebeler Corporation 2000 Military Road Tonawanda, NY 14150 Plant #1
(Name and address of Manufacturer)

2. Manufactured for Hebeler Vicksburg Corporation 2353 Haining Road Vicksburg, MS 39180
(Name and address of Purchaser)

3. Location of Installation Unknown

4. Type: Nozzle H1958
(Description of vessel part (shell, two piece head, tube bundle)) (Mfg. serial No.)

D-15387-10 Rev.2 Hebeler Corporation 1993
(Drawing No.) (Drawing prepared by) (Year built)

5. ASME Code, Section VIII, Div. 1 1992ED, 1992ADD.
(Edition and Addenda (date))

6. Shell (a) No. of courses(s): (b) Overall length (ft & in.):

Course(s)			Material Spec./Grade or Type	Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No.	Diameter, in.	Length, ft & in.		Nom.	Corr.	Type	Full. Spot. None	Eff.	Type	Full. Spot. None	Eff.	Temp.	Time

7. Heads: (a) (b)
(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp. (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp.

Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
	Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full. Spot. None	Eff.
(a)													
(b)													

If removable, bolts used (describe other fastening)

8. MAWP psi at max. temp. °F. Min. design metal temp °F at psi.
(Internal) (External) (Internal) (External)

9. Impact test
(Indicate yes or no and the component(s) impact tested)

10. Hydro., pneu., or comb. test press. Proof test

11. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Stop, Open)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Inlet	1	4"	150#LJ	★	SA105	.237"	0.0"			Welded	

12. Supports: Skirt No Lugs Legs Others Attached
(Yes or no) (No) (No) (Describe) (Where and how)

13. Remarks: Hebeler Corporation Plant #1 responsible for material, workmanship, design and engineering functions. No hydrotest performed.
*Line 11: Part consists of pipe welded to vanstone ring. 4" nozzle material is SA312-304L.

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this pressure vessel part conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

U Certificate of Authorization No. 8988 Expires April 30, 19 95

Date: 8-9-93 Name Hebeler Corporation #1 Signed Richard Stacey
(Manufacturer) (Representative)

CERTIFICATE OF SHOP/FIELD 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 New York and employed by Hartford Steam Boiler Inspection & Insurance Co. Hartford, Connecticut have inspected the pressure vessel part described in this Manufacturer's Data Report on Aug 9, 19 93, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel part described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 8/9/93 Signed [Signature] Commissions NB 9153A
(Authorized Inspector) (Net'l Board Incl. endorsement, State, Province and No.)

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1 NB 69 3/4

1. Manufactured and certified by Hebeler Corporation 2000 Military Road Tonawanda, NY 14150 Plant#1
(Name and address of Manufacturer)
2. Manufactured for Hebeler Vicksburg Corporation 2353 Haining Road Vicksburg, MS 39180
(Name and address of Purchaser)
3. Location of installation Unknown
4. Type: Nozzle (Description of vessel part (shell, two piece head, tube bundle))
(Name and address of Manufacturer) H1959
(Mfg's serial No.)
(Nat'l Bd. No.) D-15387-10 Rev.2 (Drawing No.) Hebeler Corporation (Drawing prepared by) 1993 (Year built)
5. ASME Code, Section VIII, Div. 1 1992 ED., 1992 ADD. (Edition and Addenda dates)
Code Case No. _____ Special Service per UG 120(d) _____
6. Shell (a) No. of course(s): _____ (b) Overall length (ft & in.): _____

Course(s)			Material Spec. Grade or Type	Thickness		Long. Joint (Cat. A)				Circum. Joint (Cat. A, B, & C)				Heat Treatment	
No.	Diameter, in.	Length, ft & in.		Nom.	Corr.	Type	Full Spot None	Eff.	Type	Full Spot None	Eff.	Temp.	Time		
---	---	---	---	---	---	---	---	---	---	---	---	---	---		
---	---	---	---	---	---	---	---	---	---	---	---	---	---		
---	---	---	---	---	---	---	---	---	---	---	---	---	---		

7. Heads: (a) ----- (b) -----														
(Mat'l Spec. No., Grade or Type, H.T., Time & Temp.) (Mat'l Spec. No., Grade or Type, H.T., Time & Temp.)														
	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min	Corr	Crown	Knuckle					Convex	Concave	Type	Full Spot	None
(a)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
(b)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

If removable, bolts used (describe other fastening) _____

8. MAWP _____ psi at max. temp. _____ °F. Min. design metal temp. _____ °F at _____ psi.
(internal) (external) (internal) (external)

9. Impact test _____
(Indicate yes or no and the component(s) impact tested)

10. Hydro., pneu., or comb. test press. _____ Proof test _____

11. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Inlet	1	6"	150#LJ	*	SA105	.280"	0.0"	Inherent	---	Welded	---

12. Supports: Skirt No Lugs --- Legs --- Others --- Attached ---
(Yes or no) (No) (No) (Describe)

13. Remarks: Hebeler Corporation Plant#1 responsible for material, workmanship, design and engineering functions. No hydrotest performed.
*Line 11: 6" nozzle material is SA312-304L
Parts consist of pipe welded to vanstone ring, SA240-304L

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this pressure vessel part conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

U Certificate of Authorization No. 8,988 Expires April 30

Date 7-28-93 Name Hebeler Corporation #1
(Manufacturer)

Signed [Signature]
(Representative)

CERTIFICATE OF SHOP/FIELD 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 New York and employed by Hartford Steam Boiler Inspection & Insurance Co of Hartford, Connecticut have inspected the pressure vessel part described in this Manufacturer's Data Report on July 28, 1993 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel part described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 7/28/93 Signed [Signature]
(Authorized Inspector)

Commissions NB 9153A NY 2939
(Nat'l Board incl. endorsement, State, Province and No.)

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1 *NB 69 414*

1. Manufactured and certified by Hebeler Corporation 2000 Military Road Tonawanda, NY 14150 Plant#1
(Name and address of Manufacturer)
2. Manufactured for Hebeler Vicksburg Corporation 2353 Haining Road Vicksburg, MS 39180
(Name and address of Purchaser)
3. Location of installation Unknown

4. Type. Nozzle & Cover (Description of vessel part (shell, two piece head, tube bundle))
D-15387-10 Rev.2 (Drawing No.) H1960 (Mfg's serial No.)
Hebeler Corporation (Name and address)
1993 (CRN)
5. ASME Code, Section VIII, Div. 1 1992 ED., 1992 ADD. (Drawing prepared by)
1993 (Year built)

6. Shell

(a) No. of course(s):

(b) Overall length (ft & in.):

Special Service per U.S. Code

Course(s)			Material	Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment					
No.	Diameter, in.	Length, ft & in.	Spec. Grade or Type	Nom.	Corr.	Type	Full	Spot	None	Eff.	Type	Full	Spot	None	Eff.	Temp.	Time

7. Heads: (a) _____ (b) _____														
(Mat'l Spec. No., Grade or Type, H.T., Time & Temp.)														
	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full	Spot
(a)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
(b)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

If removable, bolts used (describe other fastening) ---
8. MAWP --- (internal) --- (external) psi at max. temp. --- (internal) --- (external) °F. Min. design metal temp. --- °F at --- psi.
(Mat'l Spec. No., Grade, Size, No.)

9. Impact test ---
10. Hydro., pneu., or comb. test press. --- (Indicate yes or no and the component(s) impact tested)
11. Nozzles, inspection, and safety valve openings: --- Proof test ---

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Manway	1	24"	150#LJ	*	SA105	.250"	0.0"	Inherent	---	Welded	---
Cover	1	24"	Flat	---	SA105	---	0.0"	Inherent	---	---	---

12. Supports: Skirt No (Yes or no) Lugs --- (No) Legs --- (No) Others --- (Describe) Attached --- (Where and how)
13. Remarks: Hebeler Corporation Plant#1 responsible for material and workmanship, design and engineering functions. No Hydrotest performed.
*Line 11: 24" Manway nozzle material is SA240-304L, cover is SA516-70, clad with 304L applied lining on flange and cover.

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this pressure vessel part conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

U Certificate of Authorization No. 8,988 Expires April 30, 1995
Date 7-29-93 Name Hebeler Corporation #1 Signed [Signature]
(Manufacturer) (Representative)

CERTIFICATE OF SHOP/FIELD 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 New York and employed by Hartford Steam Boiler Inspection & Insurance Co of Hartford, Connecticut have inspected the pressure vessel part described in this Manufacturer's Data Report on July 29, 1993 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel part described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 7/29/93 Signed [Signature] Commissions NY 2937
(Authorized Inspector) (National Board incl. endorsement, State, Province and No.)