FORM U-1A MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS
(Alternate Form for Single Chamber, Completely Shop-Fabricated Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured by HAPPY DIVISION, THERMA TECHNOLOGY / TULSA, OKLAHOMA
2. Manufactured for / PHILADELPHIA PA.
3. Location of Installation / PHILADELPHIA PA.
4. Type HORIZONTAL (Horiz. or vert. tank) 3416-1-2 (Mfgr's Serial No.) --- (CRN) C-17886 (Drawing No.) 944 (Nat'l Bd No.) (Year Built) 1977

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1974 (Year) and Addenda to 12-31-76 (Date) and Code Case Nos. ---
Special Service per UG-120(d) ---
Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: ---

6. Shell: Matl. No Shell (Spec. No., Grade) Nom. Thk --- Corr. in. Allow. --- in. Diam. --- in. Lgth. -- ft -- in.
7. Seams: Long. Welded (Welded, Dbl, Sngl. Lap, Butt) R.T. No (Spot or Full) Efficiency -- % H.T. Temp. 1100 F Time 1.125 hr
Girth Welded (Welded, Dbl, Sngl. Lap, Butt) R.T. No (Spot, Partial, or Full) No. of Courses --
8. Heads: (a) Material SA-516-70 (Spec. No., Grade) (b) Material SA-515-70 (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Min. Thk.	Corr. Allow.		Flat Diam.	Side to Pressure (Convex or Concave)
(a)	T & P Sht			SEE FORM U-4 Max Span =		Flat
(b)	Wrapper Sht			Max Span =		Flat

If removable, bolts used (describe other fastenings) ---
(Material, Spec. No., Gr., Size, No.)

9. Constructed for max. allowable working pressure 480 psi at max. temp. 650 F. Min. temp. (when less than -20 F) --- F. Hydrostatic test pressure 720 psi.
10. Safety Valve Outlets: Number -- Size -- Location ---
11. Nozzles and Inspection Openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk	Reinforcement Matl.	How Attached	Location
Inlet	2	6"-300#	RFWN	SA-105 SCH 80		Weld	Welded @	Front Head
Outlet	2	4"-300#	RFWN	SA-105 SCH 160		Weld	Welded @	Back Head
Vent	1	1"-300#	RFLWN	SA-105		Weld	Welded @	Back Head
Drain	1	1"-300#	RFLWN	SA-105		Weld	Welded @	Front Head
Inlet	2	6"	SWAGE	SA-234-WPB SCH 80		Weld	Welded @	Front Head
Outlet	2	4"	PIPE	SA-106-B SCH 160		Weld	Welded @	Back Head

12. Supports: Skirt -- (Yes or no) Lugs 4 (No.) Legs -- (No.) Other --- (Describe) Attached Welded to Tube Sht (When and how)
13. Remarks: Box Header at Tube Ends 5 Row, 3 Pass, Tubes; Mat'l SA-214
Qty 273 O.D. 1" X .085 MW X 32'-0" Long.
F.W. REQ. NO. 1776-1231-A
P.G.W. EQUIP NO. 2-154-03 ITEM NO. E-102
Unit Service: REACTOR EFFLUENT COOLER

CERTIFICATE OF 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.
Date Oct. 17, 1977 Signed Happy Div. Therma-Tech. (Manufacturer) by Charles P. Latvala (Representative)
"U" Certificate of Authorization No. 10,491 expires MAY 11 1980

CERTIFICATE OF SHOP INSPECTION

Vessel made by Happy Div. Therma-Technology at Tulsa, Oklahoma
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 Arkansas and employed by Coml. Union Ins. Co have inspected the pressure vessel described in this Manufacturers' Data Report on 10-13 19 77, 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 the Manufacturers' 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.
Signed C. Mark C. Knight (Inspector) Date 10-18-77 Commissions N.B. 7935 (Nat'l Board, State, Province and No.)

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FORM U-4 MANUFACTURERS' DATA REPORT SUPPLEMENTARY SHEET
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured by HAPPY DIVISION, THERMA TECHNOLOGY / TULSA, OKLAHOMA
(Name and address of manufacturer)
2. Manufactured for , PHILADELPHIA, PA.
(Name and address of purchaser)
3. Location of Installation / PHILADLEPHIA, PA.
(Name and Address)
4. Type HORIZONTAL Vessel Number 3416-1-2 --- C-17886 944
Horiz, Vert. Tank, etc. Mfgr. serial CRN Dwg Natl. Bd. No.

Year Built 1977

Data Report Item Number LOCATION	Min. Thk.	Corr. Allow.	Remarks Flat Diam.	Side to Pressure (Convex or Concave)
8. (a) Top Front T & P Sht	1 1/8"	1/8"	Max Span= 3 15/16" (4 15/16"x11'-6")	Flat
(b) Top Front Wrapper Sht	5/8"	1/8"	Max Span= 4 1/4" (3 3/4"x11"-6")	Flat
(a) Bottom Front T & P Sht	1 1/8"	1/8"	Max Span= 6 1/8" (7 1/8"x11'-6")	Flat
(b) Bottom Front Wrapper Sht	5/8"	1/8"	Max Span= 4 1/4" (3 3/4"x11'-6")	Flat
(a) Bottom Back T & P Sht	1 1/8"	1/8"	Max Span= 1 3/4" (2 3/4"x11'-6")	Flat
(b) Bottom Back Wrapper Sht	5/8"	1/8"	Max Span= 4 1/4" (3 3/4"x11'-6")	Flat
(a) Top Back T & P Sht	1 1/8"	1/8"	Max Span= 8 3/8" (9 3/8"x11'-6")	Flat
(b) Top Back Wrapper Sht	5/8"	1/8"	Max Span= 4 1/4" (3 3/4"x11'-6")	Flat

R. B. BILLINGSLY
INSPECTOR
PROCESS PLANTS DIVISION
FOSTER WHEELER ENERGY CORP.

Date Oct 17, 1977 HAPPY DIVISION THERMA-TECHNOLOGY Signed Charles P. Estrela
Manufacturer

Date 10-18-77
Authorized Inspector's Signature Mark E. Haught Commissions NB 7935
Natl. Brd, State, Province and No.