

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by: Morfab Company Inc. 18611 141st Ave N.E. Woodinville, Washington 98072
 (Name and address of Manufacturer)

2. Manufactured for: ESC, 8645 154TH Ave N.E., Redmond, WA 98073
 (Name and address of Purchaser)

3. Location of installation UTS Bioenergy, 2211 Encinitas Blvd. #216, Encinitas, CA 92024
 (Name and address)

4. i. Type: Vertical 14208 - ESC2200104 Rev.A 13208 2011
 (Horizontal or vertical tank) (Manufacturer's serial number) (CRN) (Drawing number) (National Board number) (Year Built)

5. The chemical and physical properties of all parts meet the requirements of material specification of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to the ASME rules, Section VIII, Division 1 2010
 Year

to - - -
 {addenda(date)} (Code Case numbers) {Special Service per UG-120(d)}

6. Shell: SA240-304 .1875" 0 60" OD 6'-0" Shell
 (Material spec. number, grade) (Nominal thickness) (Corr. Allow.) (Inner diameter) (length overall)

7. Seams: Type 1 None 70 - - Type 2 None 65 1
 [Long. (welded, dbl, sngl, lap, butt)] [R.T. (spot or full)] [Eff., %] [H.T. temp. (Time, hr)] [Grth. (welded, dbl, sngl, lap, butt)] [R.T. (spot or full)] [Eff., %] (No. of courses)

8. Heads: (a) SA240-304 (b) -
 (Material spec. number grade or type) (H.T. - time & temp) (Material spec. number 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	.106"	0	-	-	2:1	-	-	-	-	X	-	-	-
(b)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

If removable, bolts used (describe other fastening) -
 (Material spec. number grade, size, number)

9. MAWP 55 PSI - at max temp. 100F -
 (Internal) (External) (Internal) (External)

Min. design metal temp. -20 F at 55 PSI Hydro. , pneu. or comb. test pressure 72 PSI

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc)	No.	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Gauge	4	.50"	CPLG	SA182-316	None	3000#	0	None	UW16.2-k	None	Head
Drain	1	1.5"	CPLG	SA182-316	None	3000#	0	None	UW16.2-k	None	Head
Relief	1	2"	RFSO	SA312-304	SA182-304 150#	Sch 10S	0	None	UW16.1-c	UW21.1	Head
Inlet	1	3"	RFSO	SA312-304	SA182-304 150#	Sch 10S	0	None	UW16.1-c	UW21.1	Head
Outlet	1	3"	RFSO	SA312-304	SA182-304 150#	Sch 10S	0	None	UW16.1-c	UW21.1	Head
Access	2	24"	RFSO	SA240-304	SA182-304 150#	Sch 10S	0	None	UW16.1-c	UW21.1	Hd/Sh

11. Supports: Skirt No Lugs 2 Legs ** Others * Attached - Welded to Hd/Sh
 (Yes or No) (Number) (Number) (Describe) (Where and how)

12. Remarks: 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, Manufacturer's name and identifying stamp)

1. For Non-Corrosive Service. 2. No, Impact Testing Not Required Per UHA 51 (d). *(6) Ladder Rungs, (4) Weld Pads (16) Mounting Clips, (2) Davit Arms. **=(4) Legs Are Bolted To The Tank.

CERTIFICATE OF SHOP/FIELD 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 Boiler and Pressure Vessel Code, Section VIII, Division 1. "U" Certificate of Authorization Number 16289

expires 6-22-2013

Date 8-9-2011 Co. Name Morfab Company Inc. Signed Lynn Gorsuch
 (Manufacturer) (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by Morfab Company Inc. at 18611 141st Ave N.E. Woodinville, Washington 98072
 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 Washington and employed by HSB CT, Hartford, CT
 have inspected the component described in this Manufacturer's Data Report on 8-9-2011, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Boiler and Pressure vessel Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her 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 8-9-2011 Signed James A. Dixon Commissions NB12571A WA12571W
 (Authorized Inspector) [National Board (incl endorsements) State, Province and number]