FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

(Alternative Form For Single Chamber, Completely Shop-Fabricated Vessels Only)

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1 LARSEN & D'AMICO MFG. LTD. 9805 - 51 Avenue, Edmonton, Alberta T6E 4W8 Manufactured and certified by (Name and Address of Manufacturer) NUMAC ENERGY LTD., c/o GAS LIQUIDS ENG. LTD., #300, 2749-39TH AVE. N.E., CALGARY, ALTA., T1Y 4T8 Manufactured for: (Name and Address of Purchaser) Location of installation LSD: 15-01-86-22-W6 (Name and Address) LD-3483-A1 REV. 1 1997 HS-8400 N8849.21 Horizontal (Year Built) (Natl Rd No.) (Horz, Vert, Tank, etc.) (Mfgr's senal No) (CRN) (Drawing No.) 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 1995 to (Year) NA Special Services per UG-120(d) Code Case Numbers 'D. (1219) 192" (4877)48" SA-516-70 MT (50.80)1/8" (32)Shell: ID /OD Length Overall Corr Allow Diam Matl. (Spec No. Grade) Nom Thk inch (mm) inch (mm) inch inch (mm) FULL UW11(a) 2 TYPE 1 FULL 1150 °F 621.1 °C 120 MIN. Seams: TYPE 1 100 Girth (Weided, Dbl RT (SpcVPartiaVFull) No of Time (hr) RT (Spot Eff (%) HT Temp Long, (Welded, Dbl Courses or Full) Sngl , Lap. Butt) Sngl., Lap., Butt) (a) Matl SA-516-70 MT Matl SA-516-70 MT Heads (Spec No Grade) (Spec No Grade) Crown Knuckle Minimum Corresion Side to Pressure Flat Ellectical Hemispherical Location (Top. Allowance Radius Radius Conical (Concave or Convex) Bottom, Ends) Ratio Apex Angle Radius Drameter (mm) (mm) (mm) in (mm) CONCAVE (0.00) (0.00)21 **ENDS** 1.959' (49.76) 1/8' (32)0 0 (a) CONCAVE (0.00) (b) **ENDS** 1.959' (49.76) 1/8' (32)0. (0.00)0, 21 If removable, bolts used (describe other fastenings) NIA (Matl. Spec No. Gr., Size, No.) 120 F 48 96 °C Min. design metal temp 4 °F -19.98 °C MAWP 1135 psi 7826 Kpa at max. temp. 1135 psi 7826 Kpa **Hydro** Test pressure 1703 psi 11742 Kpa Nozzles, inspection and safety valve openings Reinforcement Nom How Diam Purpose Location Matil Attached (inlet, outlet, drain) or Size Mat'l Thk SEE ATTACHED U4 FORM SHELL / WELDED Supports: Skirt NO Lugs N/A Legs 2 Other NA Attached (Where and How) (Yes or No) (No) (Describe) (No) Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: IMPACT TESTS EXEMPT PER UG-20(f) PARAGRAPHS 1-5 **HEAD CALCULATED Min. 1.9375 in (49.21 mm) ITEM 6,8,19,20,21, PER FIG. UCS-66 & TABLE UCS-66 CURVE D ITEM N1,N2,N3,N5 A/B, MW, PER UCS-66 (g) 3 PHASE HORIZONTAL SEPARATOR ** PRESSURE RELIEF DEVICE WILL BE HS 3627 Item # HORIZONTAL Weight: 27800 lbs. 12610.08 PROVIDED BY OTHERS IN THE PIPING **Hydrotest Position** (kg) Capacity: cu.ft 6.32 (cu. Meters) Fabrication Drawing No. LD-3483-A1 REV. 3 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. 14254 Expires October 28, 1998 Company Name Larsen & D'Amico Manufacturing Ltd Signed (Representative) (Manufacturer) CERTIFICATE OF SHOP INSPECTION Vessel constructed by: Larsen & D'Amico Manufacturing Ltd. at 9805-51 Avenue, Edmonton, Alberta 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 Alberta and employed by Alberta Boilers Safety Association have inspected the component described in this Manufacture's Data Report on 1997 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.

CONTROL Commissions Alberta # 2

(Authorized Inspector)

[National Board (include Endorsements) State, Prov. and No.]

FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Manufactured and certified by

LARSEN & D'AMICO MFG. LTD. 9805 - 51 Avenue, Edmonton, Alberta T6E 4W8

(Name and Address of Manufacturer)

Manufactured for

Type:

NUMAC ENERGY LTD., c/o GAS LIQUIDS ENG. LTD., #300, 2749-39TH AVE. N.E., CALGARY, ALTA., T1Y 4T8

(Name and Address of Purchaser)

Location of installation

LSD: 15-01 86-22-W6 (Name and Address)

Horizontal (Horz, Vert, or Sphere) SEPARATOR (Tank Sep Heat

Exh Etc)

HS-8400 (Mfgr s Serial No.)

N8849.21 (CRN)

LD-3483-A1 REV. 1 N/A (Drawing No.)

(Nat1 Bd No)

1997 (Year Built)

Purpose	Item	Diameter			Nominal	Reinforcement	How *	
(Inlet, Outlet, Drain)	No.	or Size	Type	Material	Thk.	Material	Attached	Location
PROCESS INLET	N1	6"	600# RFLWN	SA 350 LF2	1.38"		WELDED	HEAD
GAS OUTLET	N2	8*	600# RFLWN	SA 350 LF2	1.38"		WELDED	SHELL
CONDENSATE OUT	N3	3*	600# RF "HB"	SA 350 LF2	1.24"		WELDED	SHELL
WATER OUT	N4	3"	600# RFLWN	SA 350 LF2	0.81"		WELDED	BOOT HEAD
HC BRIDLE	N5 A/B	3*	600# RF "HB"	SA 350 LF2	1.24"		WELDED	SHELL
PSV	N6	2*	600# RFWN	SA 105 N	SCH. 160		WELDED	SHELL
		2*	PIPE	SA 106 B	SCH. 160			
PRESS EQUA	N7	2"	600# RFWN	SA 105 N	SCH. 160		WELDED	SHELL
		2*	PIPE	SA 106 B	SCH. 160			•
		2*	ELBOW	SA 234 WPB	SCH. 160			
HC OUT	N8	2*	600# RFWN	SA 105 N	SCH. 160		WELDED	SHELL
		2"	PIPE	SA 106 B	SCH. 160			
		2*	ELBOW	SA 234 WPB	SCH. 160			
LSHH	N9 A/B	2*	600# RFWN	SA 105 N	SCH. 160		WELDED	SHELL
		2*	PIPE	SA 106 B	SCH. 160			
WATER BRIDLE	N10 A/B	2"	600# RFWN	SA 105 N	SCH. 160		WELDED	BOOT / SHELL
		2*	PIPE	SA 106 B	SCH. 160			
PI	N11	2"	600# RFWN	SA 105 N	SCH. 160		WELDED	SHELL
		2"	PIPE	SA 106 B	SCH. 160			
TI	N12	2*	600# RFWN	SA 105 N	SCH. 160		WELDED	SHELL
		2*	PIPE	SA 106 B	SCH. 160			
DUMMY CPL'G	C1	1.	COUPLING	SA 105	3000#		WELDED	SHELL
DUMMY CPL'G	C2 A/B	1*	COUPLING	SA 105	3000#		WELDED	SHELL
MANWAY / INSP	MW	20"	600# RF "HB"	SA 350 LF2	2.97		WELDED	HEAD
		20"	600# RF BLIND	SA 350 LF2				
		20"	600# Flex Gsk't	316 SS				
		1 625	STUDS	SA 193 B7M				
		1.625*	NUTS	SA 194 2HM				
WATER BOOT	WB	18*	SHELL	SA 516 70 MT	1.25"		WELDED	SHELL
		18"	HEAD	SA 516 70 MT	1.19" MIN.			
		36" O.D.	REPAD		1.25*	SA 516 70 MT		
		-						-
		-						
		Propositional hard half-security section						

Certificate of Authorization

Type No 14254

LARSEN & D'AMICO MFG. LTD.

Signed

(Representative)

Commission Alberta #2/

(Authorized Inspector)

[Nat'l Board incl. Endorsement, State, Province and No.]

Name

Name

(Manufacturer)