

## **Unloading Procedure For 120 Gallon Cylinder**

### **1.0 Purpose**

- 1.1 The purpose of this procedure is to safely unload the contents of the cylinder and prepare the cylinder for return shipment.

### **2.0 Responsibility**

- 2.1 The Technicians and/or laborers are responsible for performing this procedure in a safe manner.

### **3.0 Safety**

- 3.1 This procedure involves the handling of hazardous materials and the contact with gas under pressure. This procedure does not purport to address all of the safety problems associated with it's use. It is the responsibility of whoever uses this procedure to consult and establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

### **4.0 Equipment**

#### **4.1 Equipment needed:**

- a. 1(one) chemical resistant hose of sufficient length to attach with the proper size connections on each end to attach to the LIQUID valve on the cylinder and the liquid fill port on the container to receive the product from the cylinder.
- b. 1(one) Nitrogen cylinder
- c. 1(one) Nitrogen pressure regulator to regulate the amount of pressure used to pad the cylinder. **Warning: The pressure of the cylinder must not exceed 200PSI.**
- d. 1(one) pressure hose of sufficient length to attach the regulator to the cylinder. To be attached to the VAPOR valve on the cylinder.
- e. 1(one) thermal oxidizing flare and hose for the removal of pressure from the container receiving the product. To be connected to the vapor port on the receiving container. **Warning: Care must be taken not to allow liquid to enter the line going to the flare.**

### **5.0 Procedure**

- 5.1 Gather all equipment needed, the cylinder of odorant, and all safety equipment needed at the storage container's location.
- 5.2 Close any pressure devices to the storage container and attach the flare to the container.
- 5.3 Light the flare and remove all pressure from the storage container.
- 5.4 Attach the chemically resistant hose to the LIQUID valve on the cylinder and to the liquid port on the storage container.
- 5.5 Attach the nitrogen regulator and hose to the nitrogen bottle.
- 5.6 Attach the other end of the nitrogen hose to the VAPOR valve on the cylinder.

## 5.0 Procedure cont.

5.7 Pressure the cylinder up, using the nitrogen, by opening the nitrogen bottle valve and the VAPOR valve on the cylinder.

*note: the nitrogen regulator should be set at 20PSI.*

### ***Warning: Do Not Exceed 200PSI on the Cylinder!***

5.8 Open the LIQUID valve on the cylinder and slowly open the liquid port on the storage container observing to see if the product is flowing.

5.9 Observe the level in the storage tank and discontinue filling once the level has reached 85%.

5.10 Close the LIQUID valve on the cylinder and the liquid port on the storage container.

5.11 Close the nitrogen bottle valve and the VAPOR valve on the cylinder.

5.12 Close the vapor valve on the storage container and extinguish the flare.

5.13 Disconnect all hoses from the cylinder and the storage container.

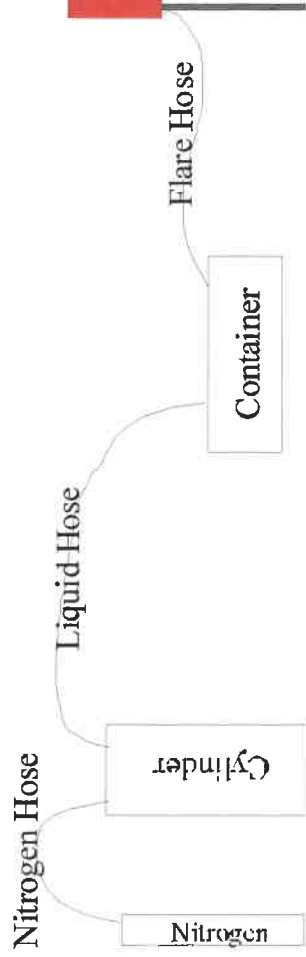
*note: the liquid hose from the cylinder to the storage container may contain liquid.*

5.14 Connect the flare to the VAPOR valve on the cylinder and remove all pressure.

5.15 Disconnect the flare line from the cylinder and plug both the LIQUID valve and the VAPOR valve.

***Special Note: In case of the unavailability of Nitrogen to use as a propellant in the cylinder, Natural Gas may be used as long as it is regulated in the same manner as the nitrogen.***

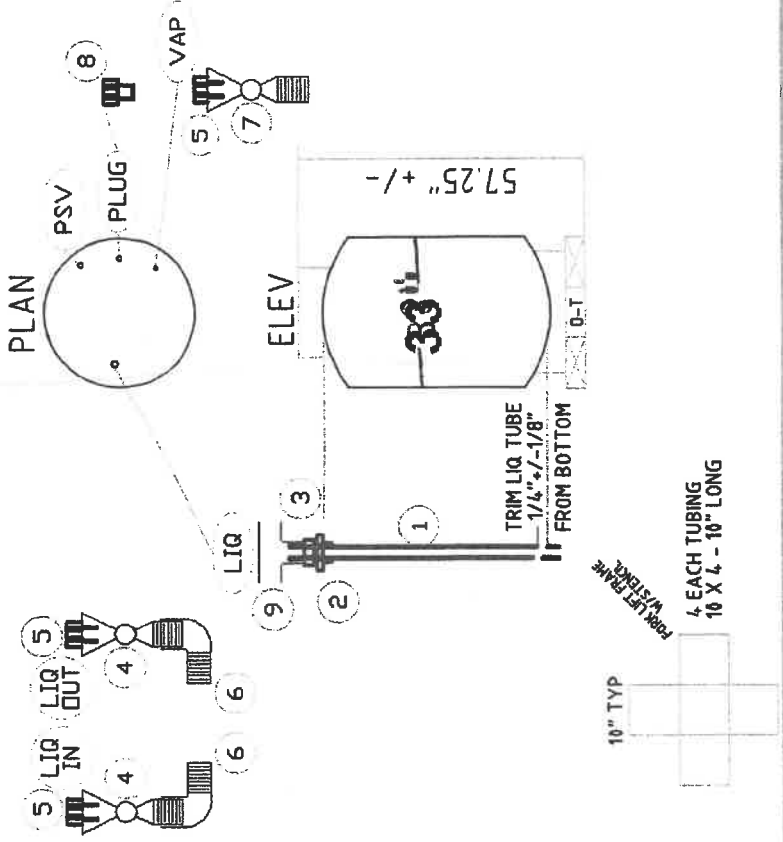
## 6.0 Diagram



BAYOU ENGINEERING COMPANY

REV#	REV. DATE	FIELD NO.
01		
02		

DOT - CYLINDER - 4 BW 240



MATERIAL - TYPICAL

- 1 1/2" TUBING, SCH 40 304 SS, 48' LG
- 2 3/4" X 1/2" BUSHING, 304 SS
- 3 1/2" X 2" NIPPLE, HEX, SCH 40 304SS
- 4 1/2" VALVE, BALL, C. S. 2000 WDG
- 5 1/2" PLUG, HEX, C. S. 2000 WDG
- 6 1/2" ELL, 90 MxFNPT
- 7 3/4MX1/2F VAL, NEEDLE C.S. 6000PSI
- 8 1" OR 1 1/4" PLUG, HEX, C. S.
- 9 1/2" TEE, S.E.

PRODUCT	S. G.	W/GAL	V. W. PETA	ROUNDS
ESH	0.840	7.00	8.37	714

NOTE 1 WC=1000 #/120 GAL ESTIMATED TARE WEIGHT 365 +/- 3/4% FILL 85 +/- CORRECT FOR P & T

DATE: 15 JUNE 2004  
 GDB  
 ETHYL MERCAPTAN - "102" GALLON - TRANSPORT

BAYOU ENGINEERING COMPANY

PROJECT INFORMATION

1. QTY UNKNOWN
2. 102.8 GAL \* 7#/GAL = 720# NET
3. TARE WEIGHT 365#
4. GROSS WEIGHT 1085# EACH
5. REQUESTED FILL-% - STD-85%  
 BID--EMPTY,NEW---\$1425  
 EST--FRT--GA---\$96  
 3DAY-FRT-TIME  
 BID--FULL--ESH---\$3995  
 EST--FRT--P,R---\$530  
 7-9DAY-FRT-TIME

1	UP	POWER	SCALE	NTS
2			A04-ESH100CYL	