



Interoffice Communication

To R. E. Lehmkuhl
From R. T. Ferrell
Date November 10, 1983
Subject Information Requested from the Lake Charles Chemical Plant
for Development of the Inventory Procedure Exhibit to
the Definitive Agreement

In response to your memo dated November 7, 1983, storage facilities for raw materials, finished products, processing chemicals, and materials and supplies are as follows:

- I. Storage Tanks
- II. Main Warehouse
- III. AFE Warehouse (Exclusively for Capital AFE's)
- IV. Ethylene Heater Parts Yard
- V. Process Chemicals Storage Shed ("Blue Building")
- VI. SAIA Warehouse (Public Warehouse)
- VII. Various Satellite Areas at Respective Units
(Minor Processing Chemicals)

1. INVENTORY TAKING PROCEDURES AND FREQUENCY

Storage Tanks

A. Alcohol - Finished and Crude

On the last day of each month, a pumper hand-gauges all "dead" tanks. Between midnight and 3:00 AM on the first day of the following month, all "live" tanks are hand-gauged.

B. Alcohol - Intermediates

Automatic gauges are used, due to the nature of this product, to determine inventory levels. Alkyl concentration in the "ATE" tanks are determined from laboratory analytical data.

C. Ethylene

Ethylene inventories are calculated daily by mass balance on the ethylene distribution system. Between 3:00 AM and 5:00 AM on the first day of the following month, readings on all by-product tanks (butadiene, LAD, etc) are recorded using either automatic gauge or gauge glass. Readings are converted to gallons by utilizing appropriate strapping tables.

D. Normal Paraffin

All tank inventories are calculated daily using automatic gauges. A 2nd controller will read "dead" tanks between 8:00 PM and

10:00 PM, while "live" tanks are recorded between 3:00 AM and 4:00 AM. The same procedure is used to calculate end of month inventories. Kerosene, LPA Solvent, and paraffin samples are taken on the first workday to determine API gravities.

E. Methyl Chloride and ETO

Methyl Chloride storage tanks are pressurized; therefore, sight glasses are used to determine inventory levels. A 2nd Controller will read "dead" tanks between 8:00 PM and 10:00 PM, while "live" tanks are read between 3:00 AM and 4:00 AM daily. The same procedure is used to calculate end of month inventories. Also, utilizing hand guages, similar procedures are used to calculate ETO volumes.

F. CDRTM

Product is stored in sea containers or railcars. Sea containers which have been loaded or unloaded are weighed at end of month.

G. Alumina

Product is stored in vessels and weighed daily.

2. MASTER LIST OF STORAGE TANKS, WAREHOUSES, ETC.

A. Comprehensive List of Storage Tanks is Attached.

B. Main Warehouse

Approximately 10,000 items valued at \$2.5MM.

C. AFE Warehouse

Used for storage of equipment/material purchased exclusively for Capital AFE's.

D. Ethylene Heater Parts Yard

Approximately 29 items valued at \$420M.

E. Process Chemical Storage Shed and Various Statellite Areas

Primarily consist of 16,500 lbs. of nickel catalyst valued at \$156M.

F. SAIA Warehouse

2,138 drums of Alcohol and Alfonics valued at \$659M.

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3. OFFSITE STORAGE - INVENTORY CONTROL

Terminal inventories are not controlled by LCCP personnel; however, we do monitor inventories at the SAIA Warehouse, Port of Lake Charles and Refinery Dock Tanks.

A. SAIA Warehouse

SAIA's book inventory is reconciled to LCCP's books on a monthly basis. A physical inventory is taken annually.

B. Port of Lake Charles

Gauge readings are received approximately three times per week and at end of month.

C. Refinery Dock Tanks

Tanks are gauged by Refinery personnel and a computer printout is sent to LCCP daily and at end of month.

D. Ethylene Storage Caverns (Domes)

Product volumes transferred to these storage domes are based on daily mass balances on the ethylene distribution system. These volumes are recorded on our books and compared monthly to volumes provided by Union Texas Petroleum. Differences are noted but are not reconciled until a dome is emptied. At this time, accumulated differences are reviewed and settlement of significant variances are negotiated.

4. A "Kardex Inventory System," per se is not utilized at LCCP. However, materials, supplies, spare parts, etc., stored in the main warehouse and ethylene heater parts yard are controlled by "WITS" (Warehouse Inventory Tracking System), a very modern and reliable computerized subsidiary ledger. Inventories are reconciled monthly to the general ledger (739 Report). A physical inventory is taken annually (historically at September 30) and all corresponding adjustments are made immediately. The last physical inventory was conducted on September 30, 1983.

Please contact me if I can be of further assistance in this matter.



R. T. Ferrell

mbr
Attachments

cc: REL RDG MJS - Houston
JADeB LRB MDB PDC DWF PRA JEL - LCCP
RWS - LAB Plant

CCR 000017098

CDRTM

LCCP

MT 11/9/53

	1	2	3	4	5	6	7
	<u>TANK NUMBER</u>		<u>CAPACITY</u> (GALS.)	<u>SERVICE</u>			
1	D-201		10,663	DECENE			
2							
3	T-253		42,300	DECENE			
4							
5							
6							
7	CDR TM IS STORED IN VARIOUS SEA CONTAINERS AND RAILCARS.						
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9							
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CCR 000017099

METHYL CHLORIDE

	1	2	3	4	5	6
	TANK NUMBER		CAPACITY (GALS.)		SERVICE	
1	D-10		12,218		METHYL CHLORIDE	
2	D-11		63,242	" "		
3	D-12		63,277	" "		
4	D-13		63,256	" "		
5	D-14		12,219	" "		
6	D-15		12,250	" "		
7	D-16		34,167	" "		
8	D-17		34,059	" "		
9	D-18		34,145	" "		
10	T-1		20,018		METHANOL	
11	T-2		10,224	"		
12	404 *		633,949	"		
13	T-4		10,045		SULFURIC ACID	
14	T-21		1,300		LIQUID CRYSTIC	
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26	* DOCK TANK					
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CCR 000017100

ETHOXYLATES

Tank No.	SERVICE	CAPACITY (GALS.)
FB-1	1412-GC	10372
2	1412-GC	10372
3	ACETIC ACID	7716
4	1214GC-30	87899
5	1412	26403
6	1012-60	39266
7	1216-CO	7430
8	1012 GB/HA	7422
9	Recycle Material	14833
10	1216CO-22	14841
11	1012-40	14835
12	1012-40	14843
13	1216CO-30	52740
14	1412-70	145966
15	1412-40	146077
16	1412-60 LE	146344
TG-714	NOVEL CATALYST	8,803
T5-202	OCTANOL	3,759
EA-1	ETHYLENE OXIDE	25,370
*	CARBON DIOXIDE	28,000 LBS.

CCR 000017101

* TANK RENTED FROM LIQUID CARBONIC

ETHYLENE, STEAM AND OFFSITES

	1	2	3	4	5	6
	TANK NUMBER	CAPACITY (GALS.)	SERVICE			
1						
2	T7-901	125,750	LIGHT AROMATIC DISTILLATES			
3	D7-901	68,444	BUTADIENE			
4	D7-902	68,484	BUTADIENE			
5	D7-922	48,128	PROPANE / PROPYLENE			
6	D7-927	48,128	P&P SLOP			
7	CONX - 3003	8,174	METHANOL			
8	D7-113	4,587	MEERX DISULFIDE			
9	D7-903	60,100	PROPYLENE			
10	FB-802	25,447	INJECTION OIL			
11	T7-903	47,012	INJECTION OIL			
12	UTP DOME - #1	63 MM / LBS.	ETHYLENE			
13	UTP DOME - #2	53 MM / LBS.	ETHYLENE			
14	NALCO'S (UNNUMBERED)	6,014	NALCO 5202			
15	NALCO'S "	1,035	NALCO 5206			
16	NALCO'S "	1,600	NALCO TRANSPORT + 7203			
17	BETZ'S "	2,008	BETZ AF-109			
18	T7-902	25,070	LIQUID CAUSTIC			
19	FB-206	5,012	LIQUID CAUSTIC			
20	CONCRETE PIT	5,000	BRINE			
21	NALCO'S (UNNUMBERED)	2,000	NALCO 356			
22	NALCO'S "	1,000	NALCO SURGARD			
23	NALCO'S "	4,000	NALCO TRANSPORT + 7203			
24	DREW'S "	3,000	DREW GARD 189 ET			
25	DREW'S "	3,000	DREW SPERSE 754			
26	DREW'S "	3,000	DREW SPERSE 739			
27	UNNUMBERED	4,796	SULFURIC ACID			
28	T7-913	423,981	LIGHT FUEL OIL (#2)			
29	T7-914	40,057.70 GALS.	SLOP OIL			
30	T7-915	40,139.96 GALS.	HEAVY FUEL OIL (#6)			
31	555	75,103	LIGHT FUEL OIL (STRIPPER OVERHEAD)			
32						
33						
34						
35						
36						
37						
38						
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40						

CCR 000017102

Prepared By
Approved By

Alumina

CCR 000017103

NORMAL PARAFFIN

WHILE	1		2		3		4		5	
	TANK NUMBER		CAPACITY		SERVICE					
	T-1		81,141.37 BBLs.		KEROSENE					
	T-2		79,687.30 BBLs.		KEROSENE					
	T-3		2,624.34 BBLs.		LPA SOLVENT					
	T-4		2,620.80 BBLs.		LPA SOLVENT OR RP-1					
	T-5		2,624.06 BBLs.		LPA SOLVENT					
	T-7		66,928.70 BBLs.		KEROSENE					
	96 *		2,563.63 BBLs.		HEAVY PARAFFINS					
	97 *		2,563.64 BBLs.		HEAVY PARAFFINS					
	159 *		81,384.61 BBLs.		LIGHT PARAFFINS					
	194 *		79,095.68 BBLs.		CRUDE PARAFFINS					
	195 *		2,552.55 BBLs.		LIGHT PARAFFINS					
	196 *		2,552.13 BBLs.		LIGHT PARAFFINS					
	402 *		53,076.82 BBLs.		HEAVY PARAFFINS					
	801		331,461 GALS.		LPA SOLVENT					
	802		88,194 GALS.		CRUDE PARAFFINS					
	803		88,225 GALS.		CRUDE PARAFFINS					
	T5-203		3,142.80 BBLs.		RAFFINATE OR SOLVENT					
	T5-204		3,143.46 BBLs.		RAFFINATE OR SOLVENT					
	T-6		63,312 GALS.		ISO-OCTANE					
	806		39,354 GALS.		NORMAL PENTANE					