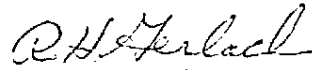


INTEROFFICE COMMUNICATION

Westlake, Louisiana
December 8, 1970

TO: L. N. Vernon
SUBJECT: Tentative Agenda For Cost Reduction Meeting

Attached is a tentative agenda for our meeting with Research and Engineering personnel on December 14. Also attached is a sheet showing the distribution of raw materials to finished products, by-products and losses. A list is being prepared showing the source of the by-products and losses.


R. H. Gerlach

RHG-MC
Attachment
cc: MJT-RSM-FK
PLF-DKP
JDB

CCR 000006867

Distribution of Raw Materials

	<u>Wt. Percent</u>
VCM, EDC and HCl to Sales	89.0
Tars	2.7
Light Ends	1.0
H ₂ to water in oxy	1.4
Organics in effluent water	2.8
Plant vent gas (C-500)	2.5
Unaccounted	0.6
	100.0

CCR 000006868

Tentative Agenda

- I. Introduction (L. N. Vernon)
- II. Business Area Background (M. J. Thomas)
(J. D. Bryan)
 - A. Sales volume projections, VCM-EDC
 - B. Selling price projections, VCM-EDC
 - C. Future quality requirements, VCM-EDC
- III. Existing Plant Loss Areas (R. H. Gerlach)
 - A. Distribution of raw material to products, by-products and losses
 - B. Origin of by-products and losses.
- IV. Potential Cost Reduction Areas
 - A. Improved Oxy Catalyst
 - 1. Selectivity
 - 2. Conversion
 - 3. Life
 - B. Utilization of ethylene in plant vent
 - 1. Additional cleanup reactor
 - 2. Recycle
 - C. Sales of by-products
 - D. Minimization of by-product formation in cracking reaction
 - E. Recovery of EDC from vent stream

CCR 000006869

LIGHT ENDS PRODUCT COMPOSITION

June - November 1970

Weight Per Cent

	<u>Range</u>	<u>Typical</u>
EDC	18.9 - 28.6	23
VCM	1.0 - 6.1	1.2
EtCl	24.2 - 38.8	29
Vinylidene	0.6 - 1.9	0.9
trans 1,2 DCE	3.7 - 4.9	4.2
1,1 Dichloroethane	2.4 - 3.5	3.2
Chloroform	17.2 - 31.4	29
Carbon tet	6.7 - 10.6	9

CCR 000006870

LIGHT ENDS PRODUCT COMPOSITION

June - November 1970

Weight Per Cent

	<u>Range</u>	<u>Typical</u>
EDC	18.9 - 28.6	23
VCM	1.0 - 6.1	1.2
EtCl	24.2 - 38.8	29
Vinylidene	0.6 - 1.9	0.9
trans 1,2 DCE	3.7 - 4.9	4.2
1,1 Dichloroethane	2.4 - 3.5	3.2
Chloroform	17.2 - 31.4	29
Carbon tet	6.7 - 10.6	9

CCR 000006871

LIGHT ENDS PRODUCT COMPOSITION

June - November 1970

Weight Per Cent

	<u>Range</u>	<u>Typical</u>
EDC	18.9 - 28.6	23
VCM	1.0 - 6.1	1.2
EtCl	24.2 - 38.8	29
Vinylidene	0.6 - 1.9	0.9
trans 1,2 DCE	3.7 - 4.9	4.2
1,1 Dichloroethane	2.4 - 3.5	3.2
Chloroform	17.2 - 31.4	29
Carbon tet	6.7 - 10.6	9

CCR 000006872

LIGHT ENDS PRODUCT COMPOSITION

June - November 1970

Weight Per Cent

	<u>Range</u>	<u>Typical</u>
EDC	18.9 - 28.6	23
VCM	1.0 - 6.1	1.2
EtCl	24.2 - 38.8	29
Vinylidene	0.6 - 1.9	0.9
trans 1,2 DCE	3.7 - 4.9	4.2
1,1 Dichloroethane	2.4 - 3.5	3.2
Chloroform	17.2 - 31.4	29
Carbon tet	6.7 - 10.6	9

CCR 000006873

LIGHT ENDS PRODUCT COMPOSITION

June - November 1970

Weight Per Cent

	<u>Range</u>	<u>Typical</u>
EDC	18.9 - 28.6	23
VCM	1.0 - 6.1	1.2
EtCl	24.2 - 38.8	29
Vinylidene	0.6 - 1.9	0.9
trans 1,2 DCE	3.7 - 4.9	4.2
1,1 Dichloroethane	2.4 - 3.5	3.2
Chloroform	17.2 - 31.4	29
Carbon tet	6.7 - 10.6	9

CCR 000006874

Prod	27.5	336.3
Tur	2.5	<u>7</u>
L.E.	1.0	6726
H ₂	1.4	
H ₂ O ₂	2.8	8.76
Gas	2.5	<u>.31</u>
Tank	<u>0.1</u>	9.07
	97.3	18.14
	<u>1.5</u>	
	97.7	
		2.69

3.6

$$\begin{array}{r}
 478.3 \\
 469.2 \\
 \hline
 7.7 \\
 \times 2 \\
 \hline
 \end{array}$$

470 MM

470	
.002	
<u>.940</u>	1,000,000

CCR 000006875

$$\begin{cases} 99.75 & \text{EDC} \\ 0.25 & 1,12 \end{cases}$$

78 % EDC

0.65 % 1,12

Tars 35% 1,12

35%

$$2137 \times 7000 = 17,112,000$$

8,556,000
1,4

3,422,000

480

52
960

2400

2400

250,000,000

230,000,000

240,000,000

2400,000

600,000

1,560,000

2,160,000

EDC 1.99MM

4.4

240

.003

.720

4.32

720,000

"Cloud" has cost us $\approx$ \$50,000 in 1970 in filtering costs.

Possibilities:

- 1a Oxy vent to R-101.
- 1a Increase feed temp to R-304.
- Inject diluent to primary reactors.
- 1a Add R-305.
- 1a Study existing R-304 set up.
PED to look at Cl_2 adsorption before and/or after R-304.
- Convert R-304 to an oxy reactor
Drive oxy reaction further with
- 1a X-5 ethylene and try to recover $\chi \approx 5$.
- 3a **Try** raising R-101 temp to reduce 1,1.
PLF to check FeCl_3 level vs 1,1,2 in R-101.
Send Barton article to FSR.
Look at raising Cl_2 conc. in R-101 to reduce 1,1.

PED to look at costs of putting oxy vent to R-101.

Plant will raise inlet ^{temp.} to R-304 immediately.

PED will lay out expt'l program for R-304.

CCR 000006877

Send R-304 report to PNC

PED will look at adsorption before and/or after R-304

RSM to talk to CPCI & Chemetron
to see cost of their studies.

R-304

R-305

Primary catalyst additives
Diluent studies.

MCH Proposes

SCANA study on diluent effect

Simox study of possible set up.

Check on sample point between
R-304 & H-305

CCR 000006879

E-Tail	.0376 #/#EDC	1,045,000,000	78,742,000
	.0359 #/#VCM	600,000,000	<u>3,540,000</u>
			32,382,000
		@ 2d	\$647,600

Losses

VCM	.0258 #/#VCM	1,5480,000
EDC	.0387 #/#EDC	<u>40,441,500</u>
		55,921,500
		\$1,118,430

52
 56
108