PLAINTIFF'S EXHIBIT
tabbies
CEL-395

CELANESE CHEMICAL COMPANY
Chemcel Plant
Bishop, Texas

Laboratory Department Summary
- July, 1973 -

RGB 63-73

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CELANESE CHEMICAL COMPANY
Chemcel Plant
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To: Mr. L. L. Schweers

From: R. G. Brandt RGB 63-73 August 10, 1973

Laboratory Department Summary
- July, 1973 -

Status of Laboratory Department projects active during July are described below. Current priorities and department statistics are attached.

MO Support - Becker, Harris, Branecky

Bank efficiency data obtained in MO I (7-25-73) showed all four banks of new catalyst at the 79-85% level. The low efficiency coupled with high reactor outlet temperatures indicate iron contamination catalyst beds. The unit was shut down July 30.

On July 13, 1973, MO II lost cooling water to the absorber and went down. The unit was restarted in four hours, however, reactor efficiency analyses indicated a decrease from 89.5% to 88.8% and unit efficiency of 86.8%. Work is in progress to increase reactor velocity to improve efficiency.

All the old catalyst has been changed in MO IV and iron levels in the process stream are being evaluated to determine what effect methanol feed purification and the York 326 demister pad have had on the system.

Samples of Engelhard Silver catalyst were evaluated in an effort to locate an acceptable alternate vendor. Engelhard catalyst was found to be an acceptable substitute for currently used Anaconda catalyst. These studies further indicate that overall MO efficiencies can be increased 1-1.5% by selecting catalyst having somewhat finer particle size. A plant trial was recommended using Engelhard 20 x 30 mesh silver catalyst. If plant data confirm Lab findings, Anaconda should also be approached on the possibility of supplying 20 x 30 mesh catalyst.

Formcel Quality - Harris

Analyses of butyl and methyl Formcel shipments by CCCTC show organic chlorides in the 3-20 ppm range. Analyses of methanol, butanol, and formaldehyde feeds

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were 1 ppm or less chloride. Work is continuing to either locate the source of the chlorides or identify analytical problems.

Formalin Tank Car Liner Evaluation - Harris

Thirty-day evaluation data is complete. All liner test strips (Plasite 3066, Talicor 40, Heresite 40, Lithcote 19) show no signs of deterioration and formalin quality compared to the control sample is good. A report will be issued when the 60-day evaluation data is complete (Sept 4, 1973).

PE Debottlenecking - Castoro

Analytical support is continuing for the Tech grade EVOP run. Mole ratios (FoH/AcH) and FoH concentration are being varied in an effort to increase throughput without altering product quality or unit efficiency.

Air Emission - Jackson

Analytical method development for MD I vapors in air is complete. Air sampling is in progress and values are being compared with unit analyses obtained using the MSA procedure. A report will be issued.

Pampa Crude Ethyl Acetate - Kerr

A 5-gal sample of crude ethyl acetate (ethanol-acetic equilibrium mixture) was received from Pampa and evaluated. Lab studies show that this mixture can be used to produce product meeting Celanese sales specs, but is not expected to pass the sensitive methyl compounds test required by some pharmaceutical accounts. It will be necessary to purge a light-ends stream for later rerun to prevent build-up of methyl acetate in recycle. Re-processing of the purge stream is expected to minimize efficiency loss (<1%).

TMP Quality - Jackson

Marketing reports indicate that we have been unable to export TMP to a Japanese customer due to quality. The customer claims that our TMP makes TMP adipate esters with high color. This claim is being evaluated using both Celanese and Japanese adipic acid and Celanese and Japanese TMP.

Paraform Quality - Prinz, Lease

Paraform polymerization studies are complete. A report will be issued.

Waste Treatment Studies - Mc Reynolds

Anaerobic studies are continuing using a feed mixture of polyol, paraform, and Celcon sumps (COD = 15,000 - 80,000). These studies are being expanded to define the effect of residence time on both packed and back-mixed anaerobic digestion vessels.

R. G. Brandt

EJH/bb
Attachments: 2

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CURRENT PROJECT PRIORITIES

	Priority	Chemist
Waste Treatment	1	Mc Reynolds
Paraform Debottlenecking and Quality	1	Lease, Prinz
Pampa Crude Ethyl Acetate	1	Kerr
Propanol Support	2	Kerr, Branecky
Pentaerythritol Debottlenecking and Efficiency	1	Castoro
TMP Debottlenecking	2	Castoro
Celcon Support	1	Gary
MO Optimization	1	Harris, Branecky
New Silver Catalyst Supplier	1	Harris, Branecky
MS Steam Savings	2	Harris
Formalin Tank Car Liner Study	1	Harris
Formcel Quality	1	Harris
Air Emissions	1	Jackson

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STATISTICS

	July	YTD	Prev. YTD
Chemical Section Samples	5,401	33,439	34,859
Instrument Section Samples	2,415	15,053	16,374
Celcon Section Samples	3,011	13,663	12,809
Total	10,827	62,155	64,042
Sample Shipping - Domestic	203	1,187	1,142
- Export	4	35	52
- Celcon	3	83	73
- Other	38	207	93
Total	248	1,512	1,360
Technicians Overtime - Hours			
Chemical	11	415	470
Instrument	4	77	350
Celcon	130	1,047	253
Special Problems	16	58	189
Total	161	1,597	1,262
Shipments (No. of orders)	703	5,255	5,126
Delayed Shipments	0	11	22
Quality Waivers	0	0	13
Customer Complaints	2*	8	12
Customer Complaints Accepted	1	5	11

* n-Butyl Acetate to the Newark Terminal - High water (0.26 wt. %) on arrival, our retain (0.06 wt. %). Complaint accepted - Carrier's responsibility.

Molten TMP trailer to Wyandotte Chemical Co. - One compartment rejected on low freeze point (54.0°C). Freeze point checked on returned material (58.0°C) and unloaded into spec. inventory.

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