



ESCAMBIA PLANT
INTEROFFICE MEMORANDUM

To: R. E. Davis

Date: December 1, 1972

From: E. A. Primeau

Copies:

Re: PVC Monthly Report -
November, 1972

SUMMARY

Prime resin production for November was 5,174 M lbs versus a budget of 5,129 M lbs and a November 20 forecast of 5,285 M lbs. Off-grade, tailings and sweeps amounted to 55 M lbs which represents 1.1% of total production versus a budget of 4.5%. Approximately 120 M lbs of resin production were lost on the north product line when the blower on the dryer failed due to metal fatigue in the impeller. The line was down 36 hours while a new impeller was installed and balanced.

A total of 573 charges were made, an average of 19 per day.

The variance generated by PVC for November was (\$10,664) unfavorable. The variance resulted from:

1. PVC Bulk - (\$13,668)
2. PVC Bagging - \$ 3,004

The forecasted variance on November 20 was \$3,400 favorable. The items affecting the variance were:

	<u>Forecast</u>	<u>Actual</u>
Raw Materials	\$2,000	(\$ 3,807) 3761
Process Costs	(200)	(7,297)
Volume	3,600	(564)
Machine Hours	(2,000)	(2,000)
Total	\$3,400	(\$13,668)

ANALYSIS OF VARIANCE

Raw materials were unfavorable due to:

- 1) An unfavorable (\$1.5M) variance in VCI due to a manufacturing efficiency of 92% for November versus a budget of 94.5%. Part of this high

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usage was due to leaks in a vent line which now has been replaced with new piping.

- 2) A low production level for off-grade resin resulting in an unfavorable variance of (\$4.8M) in by-product credit.

These unfavorable variances were partially offset by a \$1.8M favorable variance in process chemicals and \$0.6M favorable variance in royalties.

Process costs were (\$7.3M) unfavorable mainly due to (1) high maintenance costs in the chemical cleaning unit when the shell of the rototherm unit collapsed, and (2) the establishment of a \$3.4/month accrual account for the purchase of NMP solvent.

Volume variance was (\$0.6) unfavorable. 5,201M lbs. of prime resin was produced versus a standard production of 5,174 lbs. Machine hour variance was (\$2,000) unfavorable due to 30-day month. December projection is 5,400 M lbs. of resin which will generate \$3.0M favorable primarily from PVC bagging.

DISCUSSION

During November, the PVC plant produced seven resin types. Resin type 1230-P accounted for 44% of the total prime production. The south reactor line was utilized 22 days in November to produce 2,282 M lbs. of 1230-P resin in 221 charges. The average yield per reactor hour for the 1230 was 665 lbs. versus a budget of 664 lbs. per hour.

On November 5, the impeller on the north drying line failed due to metal fatigue in one of the blades. As a result, the entire north product line was out of service for 36 hours while a new impeller was installed and balanced. Approximately 120M lbs. of resin production were lost due to the outage.

The EDTA test program to reduce fouling in reactors charged with 1200 series homopolymer resins was continued. Test results continue to show a reduction in the rate of reactor fouling with an extended number of charges between cleanings.

During the month information was received showing that EDTA was FDA-approved in numerous food applications, including direct application in salad dressings. Based on this information, small residual quantities of EDTA in resin used in water pipe applications should meet FDA standards. Therefore, it is recommended that an application for FDA approval be submitted.

CHEMICAL CLEANING

The chemical cleaning system was started up and operated on NMP during

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the month of November. After some initial problems with operating conditions, the Rototherm unit was able to produce a "dry" particle equivalent to the particle produced in the pilot plant at Artisan.

In the middle of the month, a section of the inner shell of the Rototherm unit collapsed due to the reduction in the wall thickness resulting from erosion and corrosion while in DMF service. The collapsed section was cut out and replaced with a heavier patch of metal. The blades damaged when the wall collapsed inward were replaced and the unit was returned to service.

In an effort to improve the operations of the recovery unit, and reduce solvent losses, a new set of vacuum jets was ordered to replace the existing set which is badly worn. Delivery of the jets is scheduled for mid-December.

PVC EXPANSION

A major part of the month of November was spent working with the engineering department to prepare investment and operating cost studies for a PVC expansion at the Escambia Plant. Three cases were studied at a production level of 170MM lbs per year and two cases at a 340MM lbs per year level. Initial results indicate that a 170MM or 340MM lbs per year plant should be built north of the existing plant if sales volume can justify the expansion.

PVC BAGGING

A total of 2,258M lbs of PVC was bagged at a cost of \$11,188 in November.

Variance is as follows:

Volume	\$ 900
Spending	2,104
Total	<u>\$3,004</u>

PVC LOADING & SHIPPING

A total of 5,463M lbs of resin was shipped from Pace. Bulk shipments accounted for 3,129M lbs. Starting resin inventory was 790M lbs and closing inventory 672M lbs.

E. A. Primeau
E. A. Primeau *per RCD*

EAP/as
Attach.

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STATISTICS

	<u>November</u>		<u>Year-to-Date</u>	
	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Prime Product				
Homopolymer	5,174	5,129	10,567	10,429
Subtotal	5,174	5,129	10,567	10,429
Off-Grade				
Homopolymer	0	-	0	-
Tails	49	-	119	-
Sweeps	6	-	14	-
Subtotal	55	231	133	481
Total Production	5,229	5,360	10,700	10,910
Off-Grade, % of				
Total Production	1.1	4.5	1.2	4.5
Bulk Prod, % Prime	56.4	-	59.7	-
VCM Efficiency, %	92.0	94.5	92.0	94.5
Reactor Availability	93.5	92.5	94.2	92.5
Production #/Gal Yr	1,320	1,307	1,325	1,307

OFF-GRADE ANALYSIS

None.

PRODUCT SEQUENCE - NOVEMBER

<u>North Line</u>		<u>South Line</u>	
<u>Type</u>	<u>Batches</u>	<u>Type</u>	<u>Batches</u>
2225	3	1230	90
1220	2	1225	27
2160	8	1230	59
1225	19	1225	24
2200	13	1230	72
2250	6	1225	30
2225	19		302
2200	47		
2250	14		
2160	15		
2200	21		
2250	25		
2200	42		
2160	17		
2250	20		
	271		

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STATISTICS (continued)

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PRODUCTION SUMMARY - M Lbs

<u>Type</u>	<u>November</u>	<u>Year-to-Date</u>
1200	15	15
1225	893	1,933
1230-P	2,282	4,803
2160	330	397
2185	0	2
2200	976	2,095
2225	169	539
2250	509	853
Total	5,174	10,567

DOWNTIME ANALYSIS

	<u>November</u>	<u>%</u>	<u>Yr-to-Date</u>	<u>%</u>
Cleaning Reactors	515	6.5	1,056	6.6
Schedule Charges	129	1.6	185	1.1
Behind on Recovery	124	1.6	233	1.5
Hold to Drop	167	2.1	315	2.0
Plugged Drop Valves	11	0.1	33	0.2
Change Type	14	0.1	29	0.1
Slow Drying	56	0.7	106	0.6
Hydraulic Motor Maint	53	0.7	70	0.5
Miscellaneous	40	0.5	90	0.5
	1,109	13.9	2,067	13.1

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Personal

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