

File Copy

To: T. H. Huffman

From: D. C. Skokna
Date: November 27, 1990

Subject: ABERDEEN MONTHLY PROGRESS REPORT
OCTOBER, 1990

Interoffice
Communication

VISTA

Safety

There were two first aid cases reported during October. At month's end, the plant's employees had worked 4,136 days (5,522,371 manhours) since the last lost time injury.

<u>FY 1990 Key Statistical Information</u>	<u>October</u>	<u>Y.T.D.</u>
PVC Production, MM Lbs.	41.6	41.6
Reactor Stream Factor, %	87.8	87.8
Resin Quality, % Prime	98.7	98.7
VCM Efficiency, Lbs./Lb.	1.0222	1.0222
Flexible Compound Production, MM Lbs.	5.5	5.5
Flexible Compound Quality, % Prime	96.8	96.8
Rigid Compound Production, MM Lbs.	5.1	5.1
Rigid Compound Quality, % Prime	99.3	99.3
Plasticizer Production, MM Lbs.	1.9	1.9
Plasticizer Quality, % Prime	91.7	91.7
Energy Use, (EUI, %)	< 2.9>	< 2.9>
Fixed Cost Variance, \$M	< 7.2>	< 7.2>
Variable Cost Efficiency Variance, \$M	<218.0>	<218.0>

Operations

The resin unit was shut down for half a day to investigate the source of a noise in the 13KV main feeder breaker. It was concluded that the source was an arcing fault on the bus, and that it could not be immediately repaired. Repair will be made upon receipt of necessary materials.

In the flexible compound unit, PLENEX polymers development used eighty-five hours of Line I time. Business was slow; and, as a result, Line V operated 4.5 days.

Rigid compound demand remained steady through the month. Several test runs were conducted to determine the effectiveness of the product screeners.

Plasticizer demand was high all month. Operations were very good during the month.

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Costs

Fixed costs were essentially at budget.

Variable costs were unfavorable primarily due to some calculation errors. VCM usage was overstated by about 1MM pounds while the flexible compound variance due to off-grade was overstated by \$49M. With these corrections, the efficiency was close to budget.

OMP

- All of the plant's natural teams met during the month.
- The Warehouse/Stores Natural Team made its management presentation. This team collected data to identify the causes of poor condition inbound raw material shipments and the associated costs. About sixty-five percent of the unacceptable loads were from one supplier. The team contacted this supplier and reviewed the data with them. A notable improvement has been noted since this contact.
- The Vinyl "C" Shift Natural Team made their management presentation. This team revised the operator log sheets to improve routine equipment surveillance and eliminate duplication of effort.
- The Quality Control Supervisor's Natural Team made their management presentation. They improved the way the brittleness test is run. Improvements include better repeatability, improved safety (two fires were caused by the method this team will eliminate), and lower costs. A miscellaneous capital project will be needed to implement the recommendations.
- The Laboratory "A" Shift Natural Team made their management presentation. They recommended the elimination of routine resin dry time testing (out of 3000 tests/year, none were outside specification.) This test will be run on shipments and special requests. Time savings are approximately 750 manhours per year; and, since this test uses lead compounds, potential exposures to lead dust will be reduced.

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OMP - Continued

- The Vinyl "D" Shift Natural Team made their presentation to management. Their recommendations will improve surveillance of resin screeners. The benefits will be less off-grade resin and lower maintenance costs.
- PVC Compounders (a 5415 customer), part of Group Dekko, visited the plant for an overview of our operations.
- Times Fiber (a flexible compound customer), visited the plant to discuss the corrective action we have taken to resolve quality problems Times' experienced with our 38525 compound.

ENVIRONMENTAL

In discussions with the State, we learned that our new NPDES permit BOD and COD limits will be much lower than anticipated. We are reviewing this and will comment before the new permit becomes final.

The remedial investigation of the plant's Superfund sites started during October.



D. C. Skokna
Plant Superintendent

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SAFETY - B. L. Trego

	<u>October</u>	<u>Fiscal</u> <u>Y.T.D. 1990</u>	<u>Fiscal</u> <u>Y.T.D. 1989</u>
First Aid	2	2	2
OSHA Recordable	<u>0</u>	<u>0</u>	<u>1</u>
Total Injuries	2	2	3
Number of Restricted Workday Cases	0	0	0
Number of Lost Workday Cases	0	0	0

Injuries by Department

Vinyl Operations	1	1	0
Compound Operations	0	0	0
Maintenance	1	1	2
Laboratory	0	0	0
Receiving/Warehouse	0	0	0
Office	<u>0</u>	<u>0</u>	<u>1</u>
Totals	2	2	3

Injuries by Type

Cuts and Abrasions	2	2	0
Eye Injuries	0	0	0
Burns	0	0	1
Bruises	0	0	1
Strains/Sprains	0	0	0
Stings	0	0	1
Other	<u>0</u>	<u>0</u>	<u>0</u>
Totals	2	2	3

Non-Occupational Injuries

Lost Workday Cases	2	2	0
Days Lost	24	24	27

Safety Record

Last lost time injury - 7/5/79
Days since - 4,136
Employee hours since - 5,522,371

On October 31, 1990, the employees of the Aberdeen plant completed 4136 days with no lost time injury.

The topic for the October safety meeting was the conduct of a Walking/Working Surfaces Survey. Following the training, every attendee participated in a plant-wide survey.

SAFETY - Continued

A survey was done to see if there was an increase in the use of seat belts since an earlier survey prior to Mississippi's new seat belt law. There was an increase in usage from 40% to 53% during the period.

Routine dosimetry results for the month were:

<u>Chemical</u>	<u>< PEL</u>		<u>> PEL</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
VCM	85	100.0	0	0
Lead	13	100.0	0	0
Total Particulates	9	100.0	0	0

Monthly Injury Summary

<u>Injury Class</u>	<u>Department</u>	<u>Description</u>
FA	Vinyl	Abrasion, 2nd left finger
FA	Maintenance	Abrasion, 2nd right finger

A

QUALITY MANAGEMENT PROCESS - T. J. Arbeiter

All of the plant's natural teams met during the month of November. Some of team highlights for the month were:

- The Warehouse/Stores Natural Team made their presentation to management on October 9. The team collected data on inbound packaged material and determined the amount of time and money being lost by the company due to various forms of unacceptable shipment conditions.

Corrective action was taken by the team to help improve the performance of the vendor responsible for approximately 65% of all unacceptable loads. Preliminary data indicates a noticeable improvement. Data collection will continue.

- Vinyl "C" shift made their presentation to management on October 11. The team's goal was to revise operator check sheets to improve the quality of the checks performed, reduce downtime, loss of production and cost of equipment repair, improve morale by having more meaningful check sheets, and increase operator productivity. A side benefit resulting from this project is the saving of nearly 4000 sheets of a paper per year. Time studies indicate the process of completing the new check sheets is less time consuming and consensus is they are more meaningful.

- The Quality Control Supervisor's Natural Team made their presentation to management on October 16. The team justified upgrades to the brittle point tester designed to improve safety and the repeatability of the test.

The upgrade will eliminate the need for alcohol reagent (we have had two fires in the lab caused by this hazard), and will eliminate the safety concerns associated with the storage and handling of liquid nitrogen cylinders. It will also provide for greater temperature control (vital to accuracy and precision) and will eliminate delays in testing experienced in the past while waiting for nitrogen cylinders to be delivered.

- The Laboratory "A" Shift Natural Team made their presentation to management on October 17. The team presented data to support their recommendation that resin testing for regular dry time be limited to shipments and special requests only.

QUALITY MANAGEMENT PROCESS - Continued

The team's data indicated the lab performs approximately 3000 resin dry time tests per year. During FY90, not a single valid test result was outside the specification.

The team's proposal will result in a savings of 750 technician hours per year - time that will be used for truly productive work!

- The Vinyl "D" Shift Natural Team made their presentation to management on October 18. The team's goal was to identify the causes of sifter overflow and develop a cost effective solution.

The team recommended two solutions: 1) Add a scanning unit to one camera and, 2) Relocate the fluid bed camera. The estimated IRRs for these proposed solutions are 87% and 35%, respectively (approximate \$4000.00 total cost).

These solutions will reduce the amount of off-grade resin and reduce maintenance costs through earlier detection of problems.

- Chief Process Engineer's Natural Team has begun preparing process flow diagrams for all processes in their department.
- Vinyl Operations Supervisor's Natural Team has begun gathering data to be used in updating operating procedures.
- The Plant Manager's Natural Team planned and conducted the Third Annual QMP Manager's Meeting for supervisory personnel. The meeting covered the following subjects:
 - Recognition for 1990 Performance, Q-Scorecard
 - FY91 Q-Scorecard Review
 - Key Quality Issues and Customers, Challenges for 1991
 - State of the Plant (how we are doing)
 - Barriers to QMP
 - Employee Relations
 - EEO/Affirmative Action
 - Substance Abuse Situation
 - Shift Workers Starting/Quitting Time

QUALITY MANAGEMENT PROCESS - Continued

The team also established a Bulletin Board Process Improvement Team and conducted an MBWA survey to measure the effectiveness of the current bulletin board communication to employees. Another survey will be conducted in six months to measure progress.

John Greenlee, General Manager, and Mark Shire, Plant Manager, Kendallville, IN, both of PVC Compounders - Group Dekko, visited the Aberdeen Plant on October 17. John and Mark were given an overview of our operations, as well as a full plant tour. John Greenlee presented an overview of Group Dekko and PVC Compounders to the Aberdeen personnel in attendance.

Group Dekko purchases 5415 resin from Vista as well as several compound formulations from Premiere.

Bob Westrick, Quality Control Manager for Times Fiber, visited the plant on October 23. The purpose of Bob's visit was to discuss the action taken at the Aberdeen Plant to eliminate recent quality problems Times experienced with 38525 compound. Bob was also given a tour of compound lines I, III and V.

COST VARIANCES - D. C. Skokna

Variable Costs

<u>Product</u>	<u>October 1990 Variance.</u>		<u>\$M</u>
	<u>Efficiency</u>	<u>Price</u>	<u>Total</u>
PVC	<\$ 65.3>	<\$844.6>	<\$909.9>
Flexible Compound	< 117.2>	< 76.3>	< 193.5>
Rigid Compound	15.2	< 34.4>	< 19.2>
Plasticizer	< 50.7>	47.7	< 3.0>
Total	<\$218.0>	<\$907.6>	<\$1125.6>

Note:

Variances were calculated using the "old" format. (Production was the total of prime plus non-prime products. The new basis uses prime production only.) Since we were not able to get EDS to convert to the new basis for a reasonable cost, October's IPA is on the "old" basis. Starting in November, we will have the in-plant capability to calculate IPA's using the "new" production basis.

Two errors (VCM was calculated about 1MM pounds low; the flexible compound variance due to off-grade was calculated \$49.2M high) caused about \$235M of the unfavorable efficiency variance.

Fixed Cost Variances

	<u>Variance - \$M</u>
■ Payroll and Benefits	<\$ 38.7>
■ MM&C	14.0
■ Miscellaneous	47.9
■ TI&D	< 27.5>
■ Clearances	< 2.9>
Total	<\$ 7.2>

Payroll and Benefits

The primary cause of the unfavorable variance was an unfavorable \$23.3M benefits clearance.

M. M. & C.

Expenditures were somewhat below budgeted rates.

COST VARIANCES - Continued

Miscellaneous

- Outside Professional Services - \$10.6M favorable
- Contract - Operating - \$11.6M favorable
- Warehouse G/L - \$13.4M unfavorable

TI&D

Tax clearances were above budget. This category will be above budget all year due to budgeting too low.

VINYL - J. D. Olson, J. M. Vinoski

Safety

The Vinyl Department had one first aid case during October.

The monthly safety meeting topic was "Walking and Working Surfaces Survey".

General

1. A half-day vinyl unit outage was taken to investigate a noise in the main feeder breaker for vinyl in the primary 15KV switchgear. It was concluded that an arcing fault exists on the bus of this switchgear and could not be immediately repaired. A repair plan has been formulated and will be implemented upon receipt of necessary materials.
2. Mechanical design and material procurement are underway for the permanent charge water decalcification systems for the production of Klockner resin.
3. The resin raw materials in the 744 account were valued at \$306.1M.

	<u>Oct.</u>	<u>YTD</u>
- Production, MM Lbs.	40.9	40.9
- Daily Rate, M Lbs./C.D.	1320.6	1320.6
- Capacity Utilization Factor, %	103.5	103.5
- Total Reactor Charges	956.0	956.0
- Charges/C.D.	30.8	30.8
- Reactor Stream Factor, %	87.8	87.8
- Rotary Dryer Stream Factor (#4-#8), %	92.2	92.2
- Fluid Bed Dryer Stream Factor, %	96.2	96.2
- Resin Quality, % Prime	98.7	98.7

Reactor Downtime

	<u>Hours</u>
- Operational downtime (recovery scheduling conflicts, New Module rinse/charge water conflicts, waiting for Q.C. data before charging, O-ring leaks, no place to dump).	521.0
- Maintenance downtime (hydroblasting on D700, D743, D744, and D745, seal and condenser bottom gasket replacements on D743, gearbox repairs on D742, sightglass repairs on Old Module fresh VCM receiver, inspection of main electrical feed breaker for vinyl unit).	384.0

VINYL - Continued

<u>Dryer Downtime</u>	<u>% of Total Downtime</u>
- Reactor limited production.	25.5
- Operational downtime (centrifuge plugs, dryer cleaning, and flameouts).	30.8
- Maintenance downtime (screener motor replacement, centrifuge maintenance, screw feeder repair, fluid bed blower breaker repair, electrical outage due to feeder breaker inspection).	43.7

Key Maintenance Work - J. B. Autrey, S. A. Truitt

- All belts and sheaves were changed out in the fluid bed dryer blowers. The demister pads on the scrubber and a ductwork gasket downstream of the burner were also changed.
- Sewer valves were removed and replaced with blinds on all reactors.
- The shaft seal and fluid coupling on 742 gearbox were changed and the unit aligned. Wear was due to vibration.
- Reactors 744 and 743 were brought down for annual rupture disc change and hydroblasting.
- Reactor 743 had a worn seal that was replaced. The old seal was rebuilt.
- Reactor 743 bottom condenser gasket was changed because it was leaking.
- A motor was replaced on the #5 Bird due to bad windings.
- Four major valves were replaced in Vinyl.

COMPOUND - J.E. Nickerson, K.G. Akins

Safety

The Compound Department had no first aid cases or OSHA recordable injuries in October.

The topic of the monthly safety meeting was "Walking/Working Surfaces Survey".

General

PLENEX polymers production consumed eighty-five hours of production time on Line I. Line V continues to operate on an as needed basis, running for 4.5 days during October.

Demand for rigid compounds remained steady in October. Several test runs to evaluate the effectiveness of our finished product screeners were conducted during the month. The goal of these test runs is to provide information on how screener performance affects our customers and to identify future capital requirements if current screening is deemed inadequate.

Plasticizer production continued to increase in October while quality remained high. October production totalled 1.86MM pounds. Both internal and external demands remain high and are expected to continue steady.

<u>Compound Production</u>	<u>Operating Days</u>	<u>Production M (Lbs.)</u>		
		<u>Month</u>	<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Line I	31	1955	63	1955
Line III	31	3390	109	3390
Line V	4.5	<u>148</u>	<u>33</u>	<u>148</u>
Total		5493	205	5493
% Prime		96.8		96.8
Capacity Utilization Factor		.680		.680

Downtime

Hours

Line I

- PLENEX Polymers Production	85
- Product Changes	67
- Miscellaneous Maintenance	27
- Quality Problems & Control	11

Line III

- Product Changes	35
- Quality Problems & Control	33
- Miscellaneous Maintenance	26
- Roll Mill Maintenance	12
- Blender Maintenance	12

COMPOUND - Continued

Downtime - continued

Line V

- Product Changes 18
- Start Up\Shut Down 4
- Quality Problems & Control 2

	<u>Operating Days</u>	<u>Production (M lbs.)</u>		
		<u>Month</u>	<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Rigid Compound	31	5108	177	5108
% Prime		99.3		99.3
Capacity Utilization Factor		.925		.925

Downtime

Hours

- Product Changes 82
- Quality Problems & Control 37
- Miscellaneous Maintenance 35
- Screener Maintenance 14
- Univox Maintenance 8
- Air Pad Blower Maintenance 7

	<u>Operating Days</u>	<u>Production (M lbs.)</u>		
		<u>Month</u>	<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Plasticizer	31	1862	60	1862
% Prime		91.7		91.7
Capacity Utilization Factor		.989		.989

Key Maintenance Work - J. B. Autrey, S. A. Truitt

- Pulled and cleaned vacuum jets on reactors #1, #2, and #3. Maintenance work was necessary due to calcium carbonate buildup.
- Completed P.M. work on all five dicers.
- The sprocket on Line III blender gearbox was replaced due to wear.
- The motors on #5 and #9 dicers were replaced due to bad windings and bearings.
- A current transformer was installed on the dry blend Welex motors to allow for accurate observation of motor amperage.

ENGINEERING - R. E. Polk, S. C. Hillman, M. R. Kane

PROJECTS IN DEVELOPMENT - GENERAL

TC Compliance

Sampling throughout the month shows that consistent compliance with TC regulations is being attained. Several point sources are being evaluated for further reduction.

As part of the TC compliance work, TC/RCRA training was conducted for the vinyl operations personnel. This training emphasized the effects of TC compliance projects on the vinyl unit.

Dry Blend Contamination

Evaluation of the causes of oversized dry blend particles continues. Test runs have shown that some oversized material results from the transfer system after the screeners. Some oversized material passes through the screeners. Further testing is planned to quantify the relative contributions of transfer lines and screener inefficiency.

Ultraclean 5305 Resin

Discussions with Klockner have indicated a potential market for a 5305 resin with ultra low contamination or "gels". Marketing, R&D, PED, and plant engineering have initiated meetings to discuss a project to make an "ultraclean" 5305 resin.

HAZOP at LCLAB

Aberdeen Engineering facilitated a Hazard and Operability Study (HAZOP) of the HF Safety Improvements Project at the LCLAB plant. The final report has been issued to the HAZOP team members for review.

Compound Line V U-Brand Test Run

A test run was conducted to determine the capability of making rigid pellets for U-Brand on compound Line V. During the test, approximately 10,000 pounds of pellets were made. Actual production and physical appearance of the pellets was successful, though the accuracy of stabilizer weighup in a full production run is still being evaluated. Pellet samples will be tested for NSF approval and a trial will be made at U-Brand. PED and Process Engineering participated with compound operations in the test.

Advisory Group Training Workshop

Steve Hillman attended leader/facilitator training on establishing employee and community advisory groups. The training was held on October 16-17 in Houston.

ABOARD CHEMICAL PLANT
APPROVED CAPITAL PROJECTS

AFT NUMBER	PROJECT DESCRIPTION	STATUS
4858	ALTERNATE NATURAL GAS PIPELINE	THE SYSTEM HAS BEEN STARTED UP AND IS OPERATIONAL. PURCHASIST ITEMS ARE IN PROGRESS. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER. AN ALTERNATE FEEDER TO SUB-102 IS PLANNED FOR COMPLETION IN DECEMBER. CONSTRUCTION OF THE CENTRAL ROOM IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. INSTALLATION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. INSTALLATION IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER. REINSTALLATION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. FIELD CLOSURE IS PLANNED FOR DECEMBER. INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR NOVEMBER. LONG LEAD ITEMS HAVE BEEN PLACED ON ORDER. PROJECT COMPLETION IS PLANNED FOR 1/91. INSTALLATION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. DESIGN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR 12/90. THE PROJECT IS COMPLETE AND OPERATIONAL. IT WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER. REINSTALLATION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. THE SYSTEM HAS BEEN PLACED INTO OPERATION. INSTALLATION IS SCHEDULED FOR COMPLETION IN DECEMBER. INSTALLATION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. THE ORIGINAL DESIGN OF THIS IS COMPLETE AND THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN DECEMBER. DESIGN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR NOVEMBER. DESIGN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR DECEMBER. INSTALLATION IS COMPLETE ON ALL DESIGNED MODIFICATIONS TO DATE. FIELD CLOSURE IS PLANNED FOR NOVEMBER. DESIGN IS COMPLETE. INSTALLATION IS PLANNED FOR 7/91. DESIGN IS COMPLETE. INSTALLATION IS PLANNED FOR 7/91. DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR JANUARY. INSTALLATION IS COMPLETE. TESTING IS IN PROGRESS. CONSTRUCTION IS PLANNED TO BEGIN IN OCTOBER WITH COMPLETION IN JANUARY. INSTALLATION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. INSTALLATION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR OCTOBER. INSTALLATION IS PLANNED FOR NOVEMBER. ENGINEERING IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR MID-1991. DELIVERY OF THE INCINERATOR IS PLANNED FOR 3/91. PROJECT COMPLETION IS PLANNED FOR 5/91. ENGINEERING IS IN PROGRESS ON 38 PROJECTS. DELIVERY OF THE INCINERATOR IS PLANNED FOR 5/91. PROJECT COMPLETION IS PLANNED FOR 7/91. ENGINEERING IS IN PROGRESS ON 5 PROJECTS.
D818	VINYL VALVE UPGRADE	
A519	PLANT ELECTRICAL UPGRADE	
A649	VINYL CONTROL SYSTEM MODERNIZATION	
A908	IMHEITS REMOVAL MODIFICATIONS	
D619	PROPANE STORAGE AREA REMODEL SYSTEM	
D629	COMPOUND REHEATED TRANSFER SYSTEM	
D749	LEAD HANDLING AND EXPOSURE REDUCTION	
D849	COMPOUND LINE 3 SEMI-BULK LEAD HANDLING	
D859	COMPOUND SILO BRIDGE REMOVAL	
D889	RAILCAR CLEANING RACK	
P689	COMPOUND LINE 5 HEATED PLASTICIZER	
P699	LOW MOLECULAR WEIGHT BLENDED EXPANSION	
P779	DATERS NO. 4 & 5 CONTAMINATION REDUCTION	
E589	DETACHED DIV. VALVE AND CATCH REPLACEMENT	
G459	NEW WATER BARRIERS	
G819	VCM SILT GLASS REPLACEMENT	
G839	PLANT WATER RECTIFY	
A540	REDUCED FLAME & SMOKE COMPOUND PROJECT	
D570	OLD MONVAL RECOVERY SYSTEM ACCESS	
D580	RECOVERY VACUUM PUMP PRESSURE RELIEF	
D600	PLASTICIZER LOADING AND UNLOADING REVISIONS	
P590	DETACHED TRANSFER LINE ELBOWS	
P650	5305 RESIDUAL VCM REDUCTION	
G560	TC SPILL CONTAINMENT	
G610	TC COMPLIANCE PROJECT	
G630	REACTOR SLOTTED STRIPPING OPTIMIZATION	
H500	PLANT WATER SYSTEM	
H510	WEST INCINERATOR REPLACEMENT	
H520	MISCELLANEOUS CAPITAL PROJECTS < \$15K	
H620	EAST INCINERATOR REPLACEMENT	
H501	MISCELLANEOUS CAPITAL PROJECTS < \$15K	

ENVIRONMENTAL - F. G. Jeanson

Water

All wastewater discharge parameters were met for the month of October.

The NPDES permit application was completed and submitted to the State. A meeting was held with the State to review the application. Upon review of the application, the State will send us a draft permit. We have an opportunity to comment on this permit before it becomes final. Our BOD and COD limits in the draft permit will be substantially lower than our current limits.

Waste

Shipments for the month included:

- One bulk shipment of API sludge to CWM in Emelle, AL.
- One bulk shipment of lead bags to CWM in Emelle, AL.
- One drum shipment of plasticizer filter cake to CWM in Emelle, AL.

Superfund

The remedial investigation (RI) was started this month. All shallow monitoring wells were completed. Soil borings into the waste sites were completed. The deep wells will be started in November. Peter Virden with the State was here twice during the month monitoring the RI progress. The final draft on the drum removal plan is expected in November.

Air

Clement International was chosen to do further risk analysis for the plant. A letter was sent to Clement authorizing them to start. The initial two items they will be looking at include a risk analysis for people who live around the plant and a thorough investigation of risk factors for VCM - where they came from, what other states use, etc.

Toxicity Characteristic (TC)

Training on RCRA and TC was completed for the Vinyl Department. Compound and Maintenance RCRA/TC training will be done in November.

Miscellaneous

I attended CWM's Emelle landfill open house and regulatory update.

Hosted Royal Flex, a potential offgrade customer for millscrap, vacuum/vent dust and pond resin.

ENERGY CONSERVATION - D. A. Moore

	<u>October, 1990</u>	<u>Fiscal Y.T.D.</u>
I. <u>Energy Conservation Data</u>		
A. Unadjusted EUI	<2.8%>	< 2.8%>
B. Adjusted EUI	<2.9%>	< 2.9%>
C. BTU/Lb. Product	2598.0	2598.0
D. Total Energy Consumption MMM BTU	134.63	134.63

II. Plant Energy Conservation ProgramA. Maintenance

There were ninety-six energy related items completed in October, 1990. Eighty of these items were steam leak repairs. The remaining sixteen were steam trap repairs.

III. Boiler Operation

<u>Boiler</u>	<u>Combustion Efficiency %</u>	
	<u>October, 90</u>	<u>Fiscal Y.T.D.</u>
No. 1	82.9%	82.9%
No. 2	83.0%	83.0%
No. 3	82.8%	82.8%

HUMAN RESOURCE REPORT

OCTOBER, 1990

Personnel - J. E. Beall

Employment

None

Promotions/Transfers

Sherry Truitt - transferred from Mechanical Engineer to
Maintenance Engineer.

Joseph Hegwood - transferred from Maintenance Engineer to
Mechanical Engineer.

RETIREMENTS

None

TERMINATIONS/RESIGNATIONS

None

TO/FROM LEAVE OF ABSENCE

None

ABERDEEN PLANT

MONTHLY PERSONNEL REPORT

OCTOBER, 1990

<u>EMPLOYMENT</u>		<u>NEW HIRES</u>		<u>MO</u>	<u>YTD</u>
Salaried	78	Salaried/Transfer		0	6
Hourly	171	Hourly		0	0
Temporary	2	Temporary		0	6
TOTAL	251	TOTAL		0	12

DEPARTMENTS	#EMPLOYEES	M	F	%M	%F	DEPARTMENT TURNOVER		%
						MO.	YTD	
WAREHOUSE	15	8	0	53%	0	0	0	0
GENERAL PLANT	12	5	0	42%	0	0	4	40.0%
MAINTENANCE	41	9	0	22%	0	0	1	2.9%
LABORATORY	24	6	2	25%	8.3%	0	1	5.0%
COMPOUND	41	25	1	61%	2.4%	0	1	2.9%
VINYL	33	10	1	30%	3.0%	0	1	3.6%
PLASTICIZER	5	2	0	40%	0	0	1	24.0%
SUB TOTAL	171	65	4	38%	2.3%			
SALARIED	78	6	18	7.7%	23.1%			

<u>APPLICATIONS</u>	<u>NO</u>	<u>%</u>	<u>PLANT TURNOVER</u>	<u>NO</u>	<u>%</u>
Month	0	0	Hourly Month	0	0
YTD	0	0	YTD	1	.7%
Minority	0	0	Salaried Month	0	0
Female	0	0	YTD	4	6.2%

ABERDEEN CHEMICAL PLANT
DEPARTMENTAL HOURS ANALYSIS REPORT
DISTRIBUTION LIST RMS, JFC, JUV, DEPARTMENT HEADS, FILE
10/ 1/90 THRU 11/ 4/90

DEPT	OVERTIME HOURS		OVERTIME AS A % OF		ABSENCE AS A % OF STRAIGHT TIME			YEAR-TO-DATE	
	STR TIME HRS WKD	OVERTIME HOURS NONCONTROL CONTROL	STR TIME	AS A % OF	ABSENCE HRS LOST	SICKNESS	OTHER PAID UNPAID	TOTAL	VACATION HOURS
YARD	1516.00	0.00	226.75	14.96	24.00	0.00	0.00 1.50	1.50	140.00
UTILITY	756.00	0.00	110.25	14.58	0.00	0.00	0.00 0.00	0.00	84.00
MAINTENANCE	6550.50	0.00	723.50	11.04	106.25	0.00	0.24 1.38	1.62	744.00
QC LAB	3554.25	0.00	131.75	3.71	49.75	0.00	0.00 1.40	1.40	100.00
JANITORS	390.25	0.00	10.25	2.63	9.75	0.00	0.00 2.50	2.50	0.00
WAREHOUSE	1316.50	0.00	97.50	7.41	191.50	13.98	0.00 0.57	14.55	80.00
STORES	395.50	0.00	3.00	0.76	4.50	0.00	0.00 1.14	1.14	0.00
DEVELOPMENT LAB	1159.75	0.00	77.25	6.66	4.75	0.00	0.00 0.41	0.41	40.00
DRY BLEND	1200.00	0.00	109.75	9.15	0.00	0.00	0.00 0.00	0.00	76.00
COMPOUND	7032.00	0.00	492.00	7.00	300.00	2.22	0.00 2.05	4.27	440.00
VINYL	7005.50	0.00	1223.75	17.47	415.50	4.62	0.00 1.31	5.93	592.00
PLASTICIZER	1025.75	0.00	39.00	3.80	26.25	1.17	0.00 1.39	2.56	0.00
GENERAL HELPERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00	0.00	0.00
TOTAL PLANT	31902.00	0.00	3244.75	10.17	1132.25	2.12	0.05 1.38	3.55	2304.00

TOTAL PLANT HOURS FOR JULY DUTY..... 0.00
TOTAL PLANT HOURS FOR NATIONAL GUARD/RESERVE DUTY..... 0.00
TOTAL PLANT HOURS FOR DEATH IN FAMILY..... 16.00

Safety

There were no reportable safety instances this month. I attended a plant safety orientation and staff attended a walking/working surface survey training session.

Quality

Warehouse and Stores Natural Team made a presentation of their process to eliminate unacceptable inbound raw material loads.

Statistics

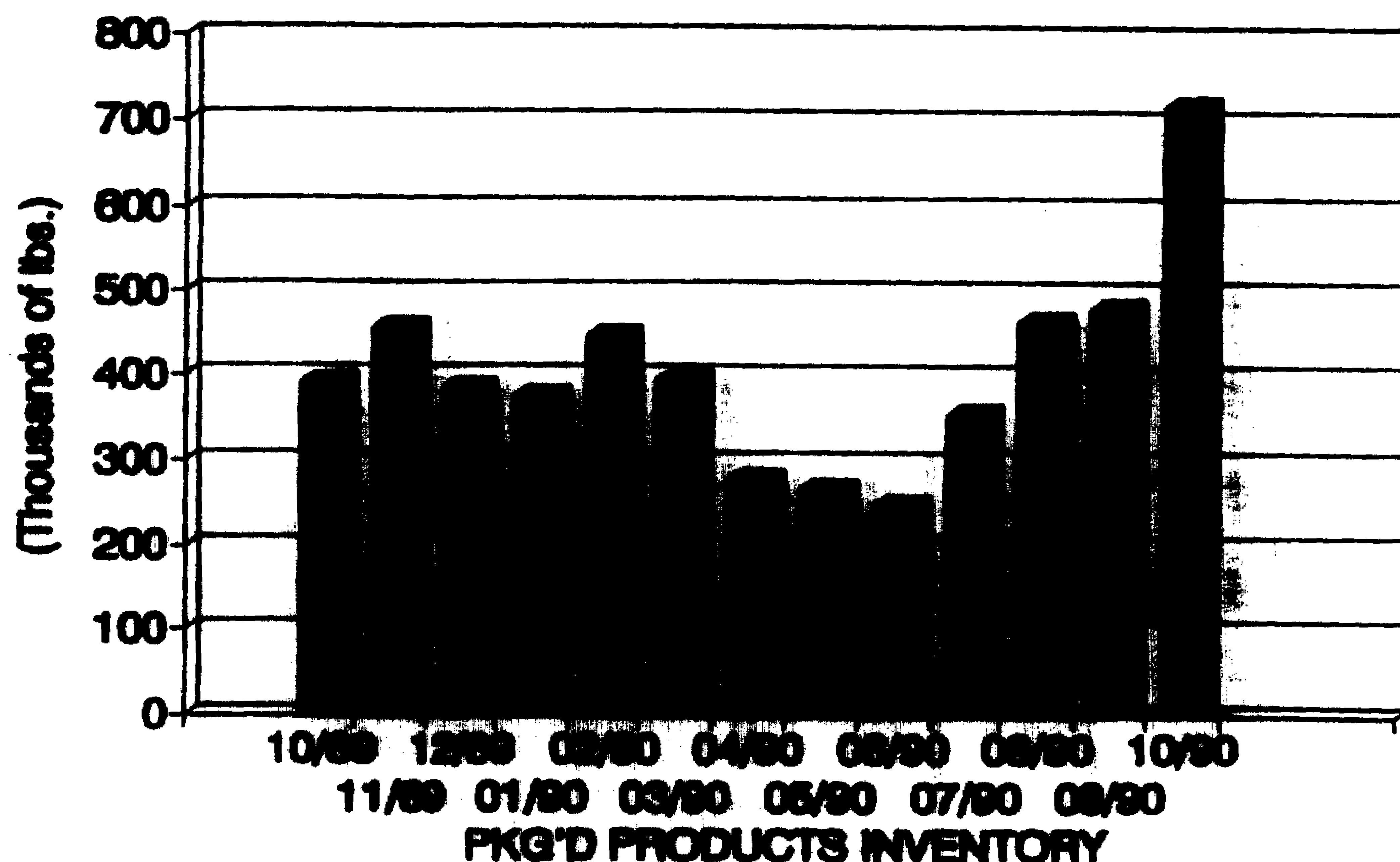
<u>Processed</u>	<u>Month</u>	<u>Y.T.D.</u>
Processed Invoices	945	945
Working Fund Checks Written	15	15
Cost Savings Through Bid Process	\$3116	\$3116

Packaged Finished Goods Ending Inventory

	<u>Sept., 1990</u>	<u>Oct., 1990</u>	<u>(Decrease) /Increase</u>
Compound "A" Grade	3,904,664	4,368,118	463,454
Compound Off-Grade (BC)	394,732	634,030	239,298
Compound Off-Grade (H)	58,755	64,755	6,000
Compound MSP - 90	90,112	95,276	5,164
Millscrap	175,008	170,691	< 4,317>
Dry Blend "A" Grade	271,497	377,526	106,029
Dry Blend Offgrade	25,308	17,729	< 7,579>
Resin Type I	441,800	452,550	10,750
Resin Type III	44,950	44,850	< 100>
Vacuum Dust	<u>301,046</u>	<u>256,879</u>	<u>< 44,167></u>
Total Packaged Warehouse	5,707,872	6,482,404	774,532

FLEXIBLE & RIGID OFF-GRADE

OCT.'89 THRU OCT.'90



ABERDEEN CHEMICAL PLANT
SHIPPING ANALYSIS
OCTOBER 1990

-SHIPMENTS BY PRODUCTS-	MONTH			YTD		
	PUBLIC	IPT/ITC	RICH/TOLL	PUBLIC	IPT/ITC	RICH/TOLL
RESIN-BULK	26,671,790	6,767,170	189,700	26,671,790	6,767,170	189,700
RESIN-PACKAGED	189,762	285,150	0	189,762	285,150	0
FLEXIBLE COMPOUND-BULK	747,730	1,948,750	0	747,730	1,948,750	0
FLEXIBLE COMPOUND-PACKAGED	2,618,949	84,037	0	2,618,949	84,037	0
NEW BUSINESS	10,283	0	0	10,283	0	0
RIGID COMPOUND-BULK	3,156,510	(13,100)	0	3,156,510	(13,100)	0
RIGID COMPOUND-PACKAGED	423,359	0	0	423,359	0	0
TOLLING - BULK	0	0	1,401,960	0	0	1,401,960
TOLLING - PACKAGED	0	0	0	0	0	0
PLASTICIZER	172,040	162,650	563,140	172,040	162,650	563,140
TOTAL	33,990,423	9,234,657	2,154,800	33,990,423	9,234,657	2,154,800

-SHIPMENTS BY MODE-

BULK:	RAILCAR	CUSTOMER PICKUP	COMMON CARRIER	TOTAL
OCTOBER				
RESIN	162	46	50	258
FLEXIBLE COMPOUND	16	0	2	18
RIGID COMPOUND	23	0	21	44
PLASTICIZER	1	13	7	21
TOTAL OCTOBER	202	59	80	341

YTD				
RESIN	162	46	50	258
FLEXIBLE COMPOUND	16	0	2	18
RIGID COMPOUND	23	0	21	44
PLASTICIZER	1	13	7	21
TOTAL YTD	202	59	80	341

PACKAGED:	CUSTOMER PICKUP	COMMON CARRIER	TOFC	CONTAINER	AIR/UPS	TOTAL
OCTOBER						
RESIN	4	17	0	0	2	23
FLEXIBLE COMPOUND	13	72	0	0	14	99
RIGID COMPOUND	1	14	0	0	0	15
PLASTICIZER	0	0	0	0	0	0
TOTAL OCTOBER	18	103	0	0	16	137

YTD						
RESIN	4	17	0	0	2	23
FLEXIBLE COMPOUND	13	72	0	0	14	99
RIGID COMPOUND	1	14	0	0	0	15
PLASTICIZER	0	0	0	0	0	0
TOTAL YTD	18	103	0	0	16	137

11/14/90

ABERDEEN CHEMICAL PLANT
PRODUCT RETURNS
OCTOBER 1990

DATE	CUSTOMER	LOCATION	PRODUCT	CODE	DESCRIPTION	BLEND #	CONT.	LBS	CR #	SHIPPED	ORDER #	INVOICE #	DISPOSITION/REMARKS
10/10/90	CENTRAL PLASTICS	KS, MCPHERSON	CMPD	1797-00	18831 WTLR	10116	BOXES	9,017	01356	08/17/90	893156-001	2201674	TO A GRADE-DID NOT MEET CUST APPLIC

								Sub	9,017				
10/12/90	VISTA-CSX 810S	OH, TOLEDO	RESIN	1842-11	5415	UTC146492	BULK	167,800	01313	09/10/90	873729-026	2204550	CAR SHIPPED TWICE

								Sub	167,800				
10/17/90	SOUTHWIRE	GA, CARROLLTON	RESIN	1842-12	5415	VIP145873	BULK	171,650	01314	09/14/90	892547-022	2205130	CONTAMINATION-RESAMPLE-SHIP EXPORT
10/17/90	TIMES FIBER	VA, CHATHAM	CMPD	1335-01	38525 BLK	30R08	BOXES	22,500	01357	10/08/90	876961-007	2210826	FAILED TENSILE TEST DUE TO BAD ATH
10/17/90	TIMES FIBER	VA, CHATHAM	CMPD	1335-01	38525 BLK	30R08	BOXES	19,500	01357	09/26/90	895904-001	2206886	FAILED TENSILE TEST DUE TO BAD ATH

								Sub	213,650				
10/23/90	FLEXIBLE TECH	SC, ABBEVILLE	CMPD	1797-00	269-172A WTLR	19F02	BOXES	4,200	01358	04/03/89	852749-004	2135454	EXPL-DID NOT FIT APPLICATION
10/23/90	FLEXIBLE TECH	SC, ABBEVILLE	CMPD	1114-58	18031 WTLR	10R13	BOXES	379	01358	03/01/90	854448-033	2175516	RETURNED BECAUSE OF DICING
10/23/90	FLEXIBLE TECH	SC, ABBEVILLE	CMPD	1389-01	46801 BLK	30R15	BOXES	790	01358	03/29/90	884171-002	2179632	RETURNED FOR PROCESSING

								Sub	5,369				
10/29/90	DAYTON EXTRUDED	OH, NIANTSBURG	DB	1629-19	RP-151 WHT145	VIP145255	BULK	37,850	01315	08/17/90	877548-041	2201736	FAILED CUST GC-F.WILLIAMS TO ADVISE
10/29/90	TIMES FIBER	VA, CHATHAM	CMPD	1335-01	38525 BLK	30R21	BULK	42,340	01318	?	?	?	SHIPPED R/C-UNLOADED SILO-RET'D TRX
10/29/90	TIMES FIBER	VA, CHATHAM	CMPD	1335-01	38525 BLK	SILOS	BULK	190,950	01317	?	?	?	RET'D IN VIP145305-CONTAMINATION
10/29/90	VYCON	PA, SCRANTON	DB	1603-10	RP-421 WHT110	FPI890179	BULK	183,600	01319	08/20/90	877894-025	2201926	CAR FROM SILO W/2 1/L'S-REJECTED
10/29/90	WEXFORD-SCANDURA	NC, CHARLOTTE	PLAST	1950-00	VPP		BULK	44,240	01316	07/31/90	800813-050	2198298	FOREIGN MATERIAL IN PLASTICIZER
10/29/90	WEXFORD-SCANDURA	NC, CHARLOTTE	PLAST	1950-00	VPP		BULK	43,980	01316	08/06/90	800813-051	2199836	FOREIGN MATERIAL IN PLASTICIZER

								Sub	542,960				

								Sub	938,796				

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LABORATORY - J. M. Edwards, Jr.

A. Safety

There were no safety incidents in the Laboratory during October. The monthly safety meeting topic was "Walking/Working Surfaces Survey" taught by Bruce Trego.

B. Customer Contacts

Mark Shire and John Greelee with PVC Compounders Inc. visited the plant. Operations and quality presentations were given followed by a plant tour.

Robert Westrick with Times Fiber Communications Inc. visited the plant. We discussed two recent quality problems with Vista's 38525 flame retardant PVC compound and actions taken to prevent recurrences.

Kelly Kinnett, Ken Brenis and Vijay Kotian with Furon visited the plant. Analytical testing methods and specifications were discussed and agreed to for PLENEX jacketing and insulation compounds.

C. Customer O.C. Problem Reports and CNR's

10/3 Sarnafil, Canton, MA

Sarnafil reported seeing black speck contamination in a truck shipment of 108P plasticizer from railcar VICX 1621. The contamination was isolated in this first truck and the remaining plasticizer in the car was used.

10/8 Vycom, Scranton, PA

Customer reported excessive amounts of multi-colored particles greater than 15 mesh in RP461 WHT 110 railcar VIPX 45263. Vycom reported railcar FPAX 890168, also RP461, ran inconsistently and caused excessive plateout. Vycom also reported metal contamination in a truck delivery from Aberdeen of RP421 WHT 110. Some of the samples of metal resemble the hold-down clips in the dry blend unit screener. A project team and a process engineer are looking into all of these problems.

LABORATORY - Continued

10/12 Marley Mouldings. Marion VA

Marley reported a 5305 car being too coarse in September. Again in October, they reported another 5305 car being too coarse to use. Both cars met Vista specifications but failed Marley's specs for particle size distribution. Three compartments in PTLX 41833 were greater than 28% (Marley's spec) on the 60 and 80 mesh combined. Vista has no such specifications. Specifications are presently being negotiated.

10/16 Times Fiber. Chatham. VA

Times Fiber reported screen pak pluggage and poor tensile strength properties in 38525 black compound. The problem was traced to high moisture and oversized aluminum trihydrate. Q.C. testing of incoming ATH was started to prevent recurrences.

10/30 Vytron. Loudon. TN

Vytron reported unfused pellets in profile samples made with 17561. Samples received from Vytron showed the contamination to be 36440 which was run in the plant just prior to the 17561 run. The cause of the problem was cross contamination due to inadequate cleanout.

D. Product Waivers

There were no waivers for the month.

E. RVCM Summary

RVCM of In-Process Samples

The following is a summary of residual VCM results on in-process samples. None of the reactor daily averages exceeded 400 ppm RVCM during the month of October, 1990.

	Reactor	Drier	
	Slurries	5265	5305
Number of Samples	952	22	98
Average RVCM, ppm	123	0.224	0.377

LABORATORY - Continued**RVCM of Shipment Samples**

The following is a summary of the residual VCM analysis of shipment samples for the month of October, 1990.

<u>Product</u>	<u>Number of Samples</u>	<u>Average RVCM. ppm</u>
5265	29	0.081
5305	152	0.123
5325	2	0.046
5385	62	0.361
5395	5	0.040
5415	60	0.031
Dry Blend	53	0.027
Debox	8	0.191
Pond	0	-----

F. Resin Process Capabilities (based on dryer "regulars")

	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5395</u>	<u>5415</u>
Bulk Density	0.92	0.89	1.25	1.16	1.38
Inherent Viscosity	0.38	1.73	0.53	0.14	0.62
(vs. 0.715 - 0.744)	----	0.87	----		
L Color	4.60	2.13	3.67	5.83	6.17
A Color	3.83	8.67	----		
B Color	3.00	2.11	1.56	2.17	6.00
% on Pan	1.13	1.78	1.78	1.67	4.22
(vs. 2%, max.)	----	----	----	----	0.89
% thru 140 Mesh	0.25	0.90	1.05	0.99	3.64
Mets I.R.	----	----	----	2.40	3.65
(vs. 95% of control)	----	----	----	----	1.74
Hard Particles, (% > 10)	----	----	16.6	10.7	4.5
Average particle size, microns	135	141	162	147	174

G. Flexible Compound Quality Summary

	<u>Adjustments</u>		<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>	<u>M Lbs.</u>	<u>(%)</u>
Hardness	22.0	<0.38>	----	----
Color	17.0	<0.29>	44.3	<0.76>
Hard Particles	----	----	70.5	<1.22>
Dicing	----	----	1.5	<0.03>
Cross Contamination	----	----	33.0	<0.57>
Mischarge			6.0	<0.10>
Total	39.0	<0.67>	155.3	<2.68>

LABORATORY - Continued

H. Rigid Compound Quality Summary

		<u>Rejections</u>	
		<u>M Lbs.</u>	<u>(%)</u>
Torque Rheometry	2.7	<0.05>	
Color	<u>17.2</u>	<u><0.34></u>	
Total	19.9	<0.39>	

I. Miscellaneous

1. All six natural teams met during the month. Two teams made project presentations to management.
2. The head space analyzer used to measure residual VCM concentrations in slurry and product samples had several failures during the month.
3. Dave Cox worked with Administrative Services Department on "Time Card" and "Safety Shoe Recording" programs using Paradox. He also started converting the plant's IPA reports to a PC instead of using time share.
4. There were two viscosity analyzer failures during the month.

SAMPLE SHIPMENTS

OCTOBER 90

RESIN

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
10/10/90	5305	10 lbs	Robbins Tire & Rubber
10/04/90	5415	2 lbs.	Sumitomo Corporation
10/12/90	5265	50 lbs.	Polycast Technologies- Uniroyal
10/16/90	5385	5 lbs.	Ferro Chemical
10/17/90	5265	5 lbs.	Vista - Austin
	5305	5 lbs.	
10/24/90	5265	50 lbs.	Keysor-Century Corporation
	5305	50 lbs.	
	5385	50 lbs.	
10/24/90	5385	5 lbs.	American Thermoplastics
	5395	5 lbs.	Extrusion Co.
	5415	5 lbs.	
10/24/90	5265	5 lbs.	Penn Color Inc.
	5305	5 lbs.	
10/29/90	5265	50 lbs.	Great Lakes Chemical Corp.

COMPOUND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
10/05/90	17462 WHT	50 lbs.	Vista - Austin
	18162 BLK	50 lbs.	
	17121 WAT CL	50 lbs.	
	18031 WAT CL	50 lbs.	
	461-119A WHT	50 lbs.	
	461-119B BLK	50 lbs.	
	461-120B WAT CL	50 lbs.	
10/10/90	38401 ORG 61	100 lbs.	KREO Company
10/10/90	419-50 A	5 lbs.	E. I. DuPont de Nemours
	419-71 B	5 lbs.	Co. Inc.
10/11/90	34862 GRY 546 OG	100 lbs	KREO Company
10/11/90	461-120A WAT CL	50 lbs.	Vista - Austin

COMPOUND (Cont.)

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
10/11/90	38401 ORG 61	100 lbs.	Coleman Cable Systems
10/15/90	38525 BLK OG	100 lbs.	Kreo Company
10/16/90	17121 WAT CL OG	100 lbs.	Kreo Company
	18162 GRY 545 OG	100 lbs.	c/o Superior Insulated
	38531 WHT 818 OG	100 lbs.	Wire Corp.
	38931 WHT 810 OG	100 lbs.	
10/17/90	38963 WAT CL	100 lbs.	Master Halco
10/19/90	38525 BLK OG	100 lbs.	Superior Plastics Inc.
	34862 GRY 546 OG	100 lbs.	
10/19/90	38525 BLK OG	200 lbs.	Hemisphere Plastics
	34862 GRY 546 OG	200 lbs.	
10/19/90	38525 BLK OG	400 lbs.	Polychem
	34862 GRY 546 OG	400 lbs.	
10/19/90	38525 BLK OG	100 lbs.	Kreo Company
	34862 GRY 546 OG	100 lbs.	
10/26/90	38401 ORG 61	50 lbs.	Coleman Cable Systems

DRYBLEND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
10/01/90	80273G WHT 110	1300 lbs.	American Maplan

ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)

