

To: T. H. Huffman

38.7

38.9

35.4

112.0

From: D. C. Skokna

Date: February 1, 1989

Subject: ABERDEEN MONTHLY PROGRESS REPORT - JANUARY, 1989

Interoffice
Communication

VISTA

Safety

There were three first aid cases reported during January. As of January 31, the plant's employees had worked 3498 days or 4,582,106 manhours since the last lost time injury.

Key Statistical Information

	<u>January</u>	<u>Y.T.D.</u>
PVC Production, MM Lbs.	38.9	154.1
Reactor Stream Factor, %	89.1	91.0
Resin Quality, % Prime	95.8	95.7
VCM Efficiency, Lbs./Lb.	1.0132	1.0157
Flexible Compound Production, MM Lbs.	6.9	25.9
Flexible Compound Quality, % Prime	97.3	95.0
Rigid Compound Production, MM Lbs.	6.6*	23.4
Rigid Compound Quality, % Prime	99.6	99.8
Plasticizer Production, MM Lbs.	1.7	7.0
Plasticizer Quality, % Prime	87.5	92.8
Energy Use, (EUI, %)	(7.4)	(3.8)
Fixed Cost Variance, \$M	66.0	(70.2)
Variable Cost Variance, \$M	241.5	1662.3
Variable Cost Price Variance, \$M	161.8	1554.8
Variable Cost Efficiency Variance, \$M	79.7	107.5

* Monthly production record.

Costs

Favorable costs in the M.M.&C. (\$38.9M), Outside Professional Services (\$27.6M), and Operating Supplies (\$25.7M) categories were somewhat offset by Payroll (\$15.1M) and Shipping (\$20.2M) costs being above budget. The favorable M.M.&C. costs were due primarily to lower than budgeted activity.

Variable costs were favorable primarily due to favorable VCM usage in the PVC unit.

T. H. Huffman

2/16/89

Aberdeen Monthly Progress Report - January, 1989

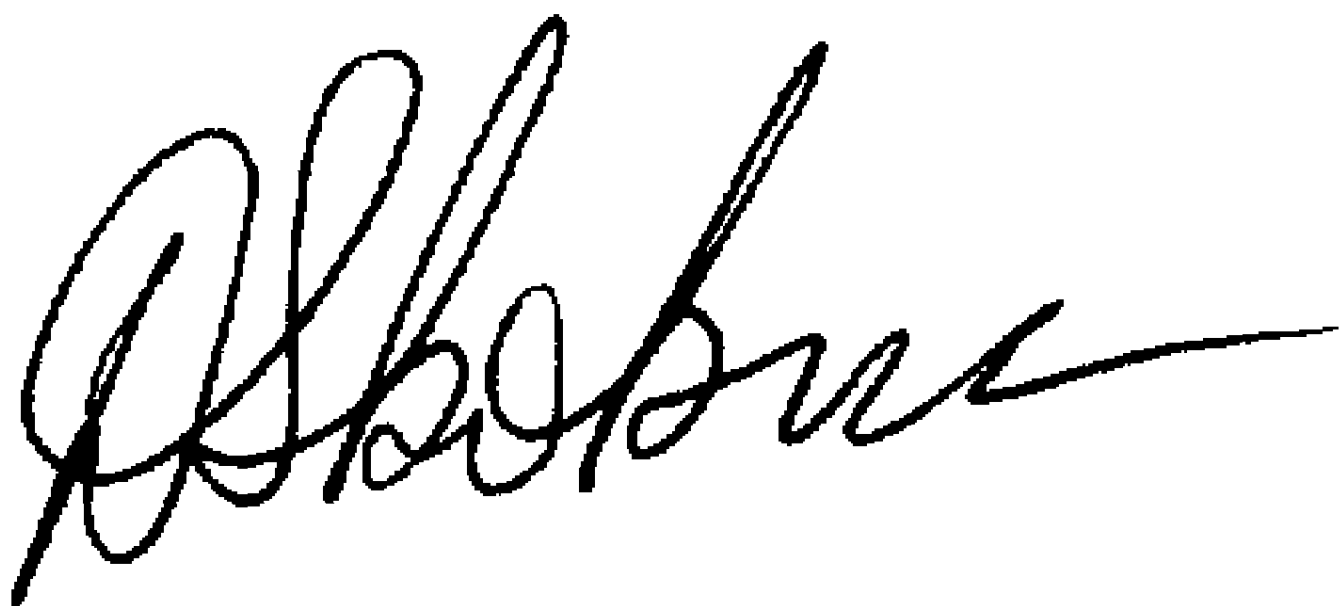
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QMP

- Team training was given to a group of salaried and hourly personnel.
- A PVC customer, General Cable, visited the plant prior to their signing a resin supply contract.
- SPC training for recently hired personnel began in January.
- Eighty-two percent of the plant's natural teams met during January.

Environmental

- Region IV EPA contacted the plant to request entry for the purpose of doing surface and sub-surface soil and water monitoring around past landfill sites. A contractor will be in the plant during February to do this work.
- J. C. Ledvina and D. L. Cohen held environmental training for operations, maintenance and engineering personnel.



D. C. Skokna
Plant Superintendent

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<u>DISTRIBUTION</u>		<u>COVER LETTER</u>	<u>ENTIRE REPORT</u>
<u>Houston</u>	J. D. Burns	X	
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	C. J. Matson		X
	D. F. Harman		X
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	R. L. Poe	X	
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<u>Oklahoma City</u>	H. G. Garrison		X
<u>LCVCM Plant</u>	R. A. Conrad		X
<u>LCCP Plant</u>	J. Friend		X
<u>LCLAB Plant</u>	J. W. Ware	X	
<u>Baltimore</u>	L. R. Bauer	X	
<u>Hammond</u>	J. B. Maher	X	
<u>Blane</u>	C. R. Miller		X
<u>Premiere</u>	P. L. Foote		X
<u>Aberdeen</u>	RWS/DCS (File Copy), PJK, JEN, DWH, TFL, JEB, HGC, JEL, REP, BLT, RBN, SCH		

SAFETY - B. L. Trego, J. V. Uptain

	<u>January</u>	<u>Fiscal Y.T.D. 1989</u>	<u>Fiscal Y.T.D. 1988</u>
First Aid	3	6	3
OSHA Recordable	<u>0</u>	<u>2</u>	<u>1</u>
Total Injuries	3	8	4
Number of Restricted Workday Cases	0	1	0
Number of Lost Workday Cases	0	0	0

Injuries by Department

Vinyl Operations	0	0	1
Compound Operations	1	2	0
Maintenance	2	6	2
Laboratory	0	0	1
Receiving/Warehouse	0	0	0
Office	<u>0</u>	<u>0</u>	<u>0</u>
Totals	3	8	4

Injuries by Type

Cuts and Abrasions	0	1	1
Eye Injuries	0	0	0
Burns	2	2	1
Bruises	0	2	2
Strains/Sprains	1	2	0
Stings	0	0	0
Other	<u>0</u>	<u>1</u>	<u>0</u>
Totals	3	8	4

Non-Occupational Injuries

Lost Workday Cases	0	1	2
Days Lost	0	20	72

Safety Record

Last lost time injury - 7/5/79
Days since - 3498
Manhours since - 4,582,106

On January 31, 1989, the employees of the Aberdeen Plant completed 3498 days with no lost time injury.

Topics for the plant safety meetings during the month included: Ladder Safety, Winterization of Equipment and Winter Ice Hazards, and Maintenance Weekly Job Planning and Safety Review.

SAFETY - continued

The plant blood drive was successful with eighty-one pints of blood being collected. This is near the record set last year.

Anzon, a lead product supplier, provided a courtesy inspection of our lead handling area and offered advice as well as praise for our system.

Bruce Trego attended the American Association of Railroads Tank Car Safety course in Pueblo, Colorado on January 30 through February 3, 1989.

Routine dosimetry results for the month were:

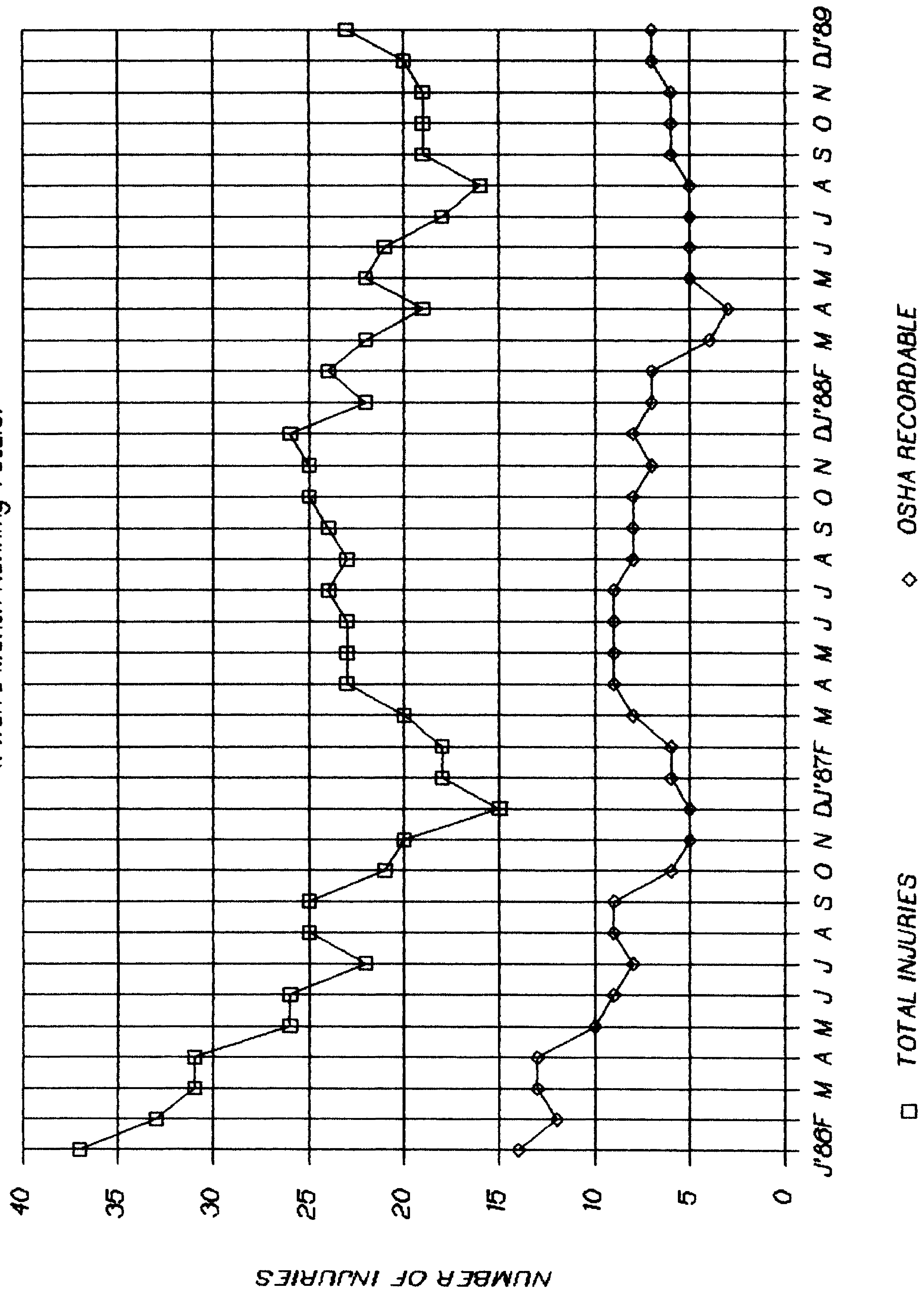
<u>Chemical</u>	<u>< PEL</u>		<u>> PEL</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
VCM	78	98.7	1	1.3
Lead	13	100.0	0	0.0
Total Particulates	5	100.0	0	0.0

Monthly Injury Summary

<u>Injury Class</u>	<u>Department</u>	<u>Description</u>
FA	Maintenance	First degree burn of left forearm.
FA	Maintenance	First degree burn of left forearm.
FA	Compound	Strain of neck muscles.

ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)



QUALITY DEVELOPMENT - D. W. Hollis

General Plant

1. A make-up session of Team Management was given the week of January 17 for new hires and people unable to attend the training last May. Five hourly personnel were included in this training.
2. SPC training for new hires was started January 31.
3. The Plant Manager's Natural Team met twice during the month. Main items of discussion were: 1) Planning QMP Management meetings for first and second level supervisors; 2) Planning of employee meetings to be held in February; 3) Communicating the status of the Compound survey.
4. Cao Chu-ba of General Cable visited the plant for review prior to signing a contract for resin supply.

Mechanical Department

There were seven natural team meetings held during the month. The agenda for all of the meetings included a brainstorming session on how safety can be improved in the workplace. The results of the brainstorming sessions were consolidated into the five most important items and submitted to the Safety Department.

The Quality Implementation Plan was updated.

All new salaried Mechanical Department employees and one hourly employee attended Team Management training.

Vinyl Department

The Department Head's Natural Team met once in January. Agenda items included: Employee Action Teams, Safety Suggestion Meetings, Key Performance Areas, QIP Status, Klockner Status and Process Capabilities.

Each shift supervisor's natural team met during the month with the topics being employee safety suggestions and a discussion on Klockner quality issues and action steps.

Two employee action teams are active in the department; Plasticizer Unloading Team and the V-11 Dustbusters.

Compound Department

Three customer visits occurred in January: Ted Nickerson visited Donnelly and Lamar; Jimmy Autrey visited Master-Halco.

Aberdeen hosted Anzon, Inc. (one of our suppliers of lead) for a plant visit. Their personnel conducted a "mock OSHA inspection" of the areas of our plant in which lead is handled.

QUALITY DEVELOPMENT - Continued

Compound Department - continued

The Dry Blend Improvement Team held its first meeting in January. Two new teams were formed: Waste Oil Reduction Team and the Mill Scrap Improvement Team.

Two operators, Jack Wertz and Dave Gathings, attended Team Management Training.

COST VARIANCES - D. C. SkoknaVariable Costs

<u>Product</u>	<u>January 1989 Variance, \$M</u>		
	<u>Efficiency</u>	<u>Price</u>	<u>Total</u>
PVC	\$ 75.6	\$ (61.6)	\$ 14.0
Flexible Compound	(57.6)	99.7	42.1
Rigid Compound	28.1	21.3	49.4
Plasticizer	<u>33.7</u>	<u>102.3</u>	<u>136.0</u>
	\$ 79.7	\$ 161.8	\$ 241.5

PVC - Energy and VCM efficiencies were better than budget; and a correction to previously consumed calcium stearate caused this month's favorable efficiency variance.

Flexible Compound - Consumption of 610P and off-grade production were both above budget causing the unfavorable efficiency.

Rigid Compound - This month's favorable variance was caused primarily by the product mix.

Plasticizer - VRP recoveries were above budget; and, as a result, the month's efficiency variance was favorable.

Price Variances

	<u>\$M</u>
- 610P (to flexible compound)	\$96.8
- AlfolR610	85.2
- Resin (to Compound)	19.4
- Stabilizer	17.4
- VCM Freight	10.6
- TiO2	(10.4)
- Alcotex	(10.5)
- Natural Gas	(71.2)
- Other Price Variances	<u>24.5</u>
Total	\$161.8

Fixed Cost Variances

	<u>\$M</u>
- Payroll and Benefits	(\$15.1)
- MM&C	38.9
- Miscellaneous	35.8
- TI&D	7.8
- Clearances	<u>(1.4)</u>
Total	\$ 66.0

COST VARIANCES - Continued

Payroll and Benefits - Above budget overtime and a holiday caused the unfavorable variance.

M.M.&C. - This category was favorable due to low activity levels.

Miscellaneous

- Outside professional services were \$27.6M under budget due to lower than expected use of contract engineers, as well as several major items not occurring as budgeted (namely, \$12,000 recruiting fee, and a \$10,000 air modeling study).
- Operating supplies were \$25.7M favorable.
- Shipping costs offset these favorable items by \$20.2M, primarily due to a problem in accurately accruing these costs.

A

OPERATIONS AND MECHANICAL DEPARTMENTS - P. J. Kober, Ted Lyon, Ted Nickerson

Operations/Mechanical Safety

Safety

There were two injuries requiring first aid treatment during the month. Two mechanics suffered minor first degree burns when they contacted hot steam tracing while installing the D700 reactor condenser lid. The Compound Department had one first aid case in January. An operator bumped his hard hat on a transfer line and jammed his neck. No injury was sustained. The Vinyl and Yard Department operated without injury in January.

The monthly safety meetings included brainstorming sessions on safety suggestions for inclusion in the plant's 1989 safety program. The Compound Department also reviewed ladder safety and discussed recent accidents.

VINYL - P. J. Kober, C. J. McDonaldGeneral

1. A blend of dual suspending agent 5385 was produced and bagged for testing in Compound.
2. Four railcars of Isonox^R 132 killed 5305 were produced for testing at Hoechst-Celanese Corporation.
3. Chem wash/rinse nozzles were checked for spray patterns in the old module. The D600 nozzle was adjusted to improve its pattern.
4. The resin raw materials in the 744 account were valued at \$403.5M.

	<u>January</u>	<u>YTD</u>
- Production	38.9	154.1
- Daily Rate, M Lbs./C.D.	1255	1253
- Total Reactor Charges	909	3644
- Charges/C.D.	29.3	29.6
- Reactor Stream Factor, %	89.1	91.0
- Rotary Dryer Stream Factor (#4-#8), %	84.8	85.2
- Fluid Bed Dryer Stream Factor, %	93.1	95.6
- Resin Quality, % Prime	95.8	95.7

Reactor Downtime

	<u>Hours</u>
- Operational downtime (recovery scheduling conflicts, downtime to rinse chem wash tanks, new module rinse/charge water conflicts, waiting on particle size data before charging, inclement weather, low steam pressure, wash small blend tanks, taking water samples for toxic characteristics testing, check old module reactor rinse spray patterns, clearing blend tank 646 air spargers, and no place to dump).	263.1
- Maintenance downtime (hydroblast D700, D745, D600, D500, D400 and D743 shell and condenser, no place to dump while repairing fluid bed, D700 agitator fluid coupling, D700 agitator gearbox and motor, D744 seal, and miscellaneous instruments and valves).	549.6
Total Downtime	<u>812.7</u>

VINYL - continued

Reactor Downtime - continued

<u>Dryer Downtime</u>	<u>% of Total Downtime</u>
- Reactor limited production	54.6
- Operational downtime (centrifuge plugging, dryer cleaning, activator transfer problems, checking dust collector socks for leaks, flameouts and checking sifter screens).	14.1
- Maintenance downtime (fluid bed plug flow exhauster bearings, fluid bed screener, #5 Star valves, #5, #7 and #8 dust collector air pulse, #4 transfer line leaks, safety belt guard installation on all centrifuges, plant air compressor maintenance, and various activator and centrifuge repairs).	31.3

Key Maintenance Work - D. A. Miller, J. B. HegwoodReactor Area

- Reactor 700 was shut down for repairs to its agitator gearbox and motor. The motor and gearbox both had bearing failures that were caused by a bad vibration problem. The fluid coupling is suspected to be the cause of this problem. The motor and gearbox were both rebuilt and put back in service. As a result of this failure, a vibration survey is being conducted to prevent this type of problem from occurring again.
- Reactor 700 and 745 were shut down for hydroblasting during the month. This is a continuing part of the Klockner Contamination Control Program.
- Also during the month, reactors 300, 400, 500, 600 and 743 were shut down for hydroblasting. All reactor condensers were hydroblasted from the bottom during the month. This was done to prevent having to lift the condenser lids for condenser cleaning. This will significantly reduce the amount of time to do this job. This new condenser cleaning procedure will reduce downtime by at least twelve hours.
- A new pressure regulator was installed in the supply line to the blowdown tank pump seals. This was down in order to correct a seal failure problem.

VINYL - ContinuedKey Maintenance Work - continued

- Several repairs were made to the fluid bed dryer equipment during the month. The motor sheave and belts were replaced on the fan due to normal wear and the springs for the south fluid bed Kason were changed. The bearings and the seals on the plugflow blower were also changed.
- Number six and eight Bird centrifuges were changed out and rebuilt due to normal wear and a trunion bushing failure.
- The north ring seal water pump for the emission recovery system was rebuilt and a new rear housing was installed which had corroded.
- There were five major valves changed out in the reactor area during the month.

COMPOUND - J. E. Nickerson, J. B. AutreyGeneral

Numerous test runs were completed in January. Rigid pellets were produced on Line V and sent to R&D for analysis. Also on Line V, a new pigment for 38401 Orange was successfully tested.

An initial test using encapsulated lead was conducted on compound 38931 White on Line I. We are waiting on analysis from R&D. Test runs for low-smoke, low flame compounds 416-5E Natural and 271-201B Natural were conducted on Line I. The 416-5E ran without incident. The 271-201B had processing problems which have necessitated a reformulation. A test run is scheduled for mid-February to produce the new reformulation.

A Dry Blend monthly production record of 6.56MM lbs. was set in January. This eclipses the old record of 6.15MM lbs. set in April, 1988.

<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	2016	65	8140
Line III	31	3764	121	14186
Line V	23.5	<u>1098</u>	47	<u>3594</u>
Total		6878		25920

DowntimeHoursLine I

- Product Changes	82
- Quality Problems & Control	26
- Dicer Problems & Maintenance	23
- Banbury Seal Repair	17
- Miscellaneous Maintenance	15
- Transfer Problems & Limitations	10

Line III

- Product Changes	60
- Transfer Problems & Limitations	18
- Quality Problems & Control	13
- Dicer Problems & Maintenance	6
- Miscellaneous Maintenance	6

Line V

- Product Changes	38
- Quality Problems & Control	10
- Hot Oil Heater Maintenance	8
- Crammer Feeder Maintenance	6

COMPOUND - Continued

	<u>Operating Days</u>	<u>Month</u>	<u>Production (M Lbs.)</u>	
			<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Rigid Compound	31	6568	212	23358

Downtime

Hours

- Product Changes 64
- Quality Problems & Control 41
- Welex Problems & Maintenance 9
- Transfer Problems & Limitations 5

	<u>Operating Days</u>	<u>Month</u>	<u>Production (M Lbs.)</u>	
			<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Plasticizer	29	1862	64	7202

Key Maintenance Work - D. A. Miller, J. B. Hegwood

- Plasticizer reactors R-2 and R-4 were shut down for repairs on their water and steam coils. The steam coil in R-4 reactor was leaking, which was caused by a support rubbing against the line. R-2 reactor water coil had a circumferential crack which could possibly be a fatigue failure.
- The plasticizer Schenk filter was pulled out and cleaned and the leaking seals in the Schenk filter were replaced.
- Compound Line III was shut down in order to change out the housing on the top hydrotherm pump. This pump was leaking due to a steam cut.
- The Line I Banbury seals were changed out.

Utilities - D. A. Miller, J. B. Hegwood

- The Frick inerts removal system compressor failed and was replaced with a spare. A Patterson Enterprise representative was brought in for consultation on needed repairs on the Frick system.
- The inboard bearing on #1 boiler feedwater pump was replaced due to failure.
- The #5 boiler feedwater pump was rebuilt and a new modified impeller was installed to correct an operation problem.
- The large booster water pump was overhauled.

COMPOUND - ContinuedUtilities - continued

- The Pall air dryer was shut down for minor leak repairs to one of its three-way valves.
- Two drain valves on the sulfuric acid tank were replaced due to leaks and one block valve was installed.
- The suction and exhaust valves were replaced on the first stage of #9 air compressor due to normal wear.
- Safety lockouts were installed on lab exhaust fans for increased maintenance personnel safety.

ENGINEERING - R. E. Polk, S. C. Hillman, V. L. Thornhill

PROJECTS IN DEVELOPMENT - GENERAL

Lead Handling and Exposure Reduction

The use of encapsulated lead was tested on Compound Lines I and V to identify differences in handling and processing. Normal Q.C. testing did not show any differences. Samples have been sent to Ponca City for evaluation.

RCRA Toxicity Characteristic

Plant engineering and PED are developing methods to meet expected compliance limits of the future RCRA Toxicity Characteristic (TC) rule. The latest information available indicates publication of a final rule sometime after August, 1989, with one year to comply.

Resin Contamination Reduction

Engineering of short term items identified by the Klockner Contamination Team is in progress. Most of these items will be completed before or be included in the Fourth Quarter Capital Budget.

Coker Water Test Run

A water balance was completed for designing the new Coker water supply system. Specifications are being prepared for the iron removal/filtration system.

Vinyl DCS

A meeting was held with GED and plant personnel to review the proposed layout of the new control building to house the system.

Recruiting

By the end of January, all plant interviews were completed. There have been two process engineering job acceptances and two mechanical engineering job acceptances. Three of these started to work in January while one is scheduled to begin in August.

=====
ABERDEEN CHEMICAL PLANT
APPROVED CAPITAL PROJECTS
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AFE NUMBER	PROJECT DESCRIPTION	STATUS
F786/F557	RESIN QUALITY IMPROVEMENT PROJECTS	-----
H636	CRITICAL SPARE EQUIPMENT	THE SA MODULE IS OPERATIONAL WITH PUNCHLIST ITEMS IN PROGRESS.
A568	5415 PRODUCTION IN THE OLD MODULE	THE ORIGINAL SCOPE IS COMPLETE AND THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN FEBRUARY.
A698	ROOF UPGRADE PHASE III	PUNCHLIST ITEMS ARE IN PROGRESS AND SCHEDULED FOR COMPLETION IN FEBRUARY.
A718	PLANT AIR SYSTEM MODIFICATIONS	PUNCHLIST ITEMS ARE COMPLETE AND THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN FEBRUARY.
A728	RECOVERY SYSTEM COMPRESSOR	ENGINEERING IS IN PROGRESS WITH CONSTRUCTION PLANNED FOR COMPLETION IN FEBRUARY.
A808	500 SERIES SILO VALVES	THE COMPRESSOR IS ON ORDER AND DUE IN FEBRUARY.
C558	DRY CALCIUM STEARATE ADDITION SYSTEM	ALL MATERIALS HAVE BEEN RECEIVED AND INSTALLATION IS PLANNED TO BEGIN IN FEBRUARY.
C738	PLASTICIZER REACTOR CONDENSER	THE ORIGINAL SCOPE OF WORK IS COMPLETE AND THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN FEBRUARY.
C748	RESIN RAILCAR CLEANING SYSTEM	THE CONDENSER HAS BEEN RECEIVED AND INSTALLATION IS PLANNED FOR EARLY MARCH.
C788	VINYL HYDROBLASTING UNIT	INSTALLATION OF THE PIPING SYSTEM IS IN PROGRESS. COMPLETION IS PLANNED FOR APRIL.
C798	RECOVERY SYSTEM PRESSURE CONTROL	THE ORIGINAL SCOPE OF WORK IS COMPLETE AND THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN FEBRUARY.
D618	VINYL VALVE LIMIT SWITCHES PHASE III	INSTALLATION IS SCHEDULED TO BEGIN IN FEBRUARY.
D638	BOILERHOUSE MCC REPLACEMENT	THE ORIGINAL SCOPE OF WORK IS COMPLETE AND THE PROJECT IS CLOSED TO FIELD CHARGES.
D648	D-745 BME ADDITION SYSTEM MODIFICATIONS	THE ORIGINAL SCOPE OF WORK IS COMPLETE AND THE PROJECT IS CLOSED TO FIELD CHARGES.
D668	OXYGEN MONITORS	INSTALLATION IS COMPLETE EXCEPT FOR THE I/E PORTION. THIS PLANNED FOR COMPLETION IN FEBRUARY.
D818	VINYL VALVE UPGRADE	CONSTRUCTION IS IN PROGRESS AND PLANNED FOR COMPLETION IN FEBRUARY.
F868	SOYA EPOXY ELECTRIC TRACING	ENGINEERING IS IN PROGRESS. ALL VALVES WILL BE PLACED ON ORDER IN FEBRUARY.
F588	D-700/745 TEMPERATURE CONTROL REVISIONS	THE ORIGINAL SCOPE OF WORK IS COMPLETE AND THE PROJECT CLOSED TO FIELD CHARGES.
6688	PLASTICIZER EDUCTOR COOLING WATER RECYCLE	THE ORIGINAL SCOPE OF WORK IS COMPLETE AND THE PROJECT CLOSED TO FIELD CHARGES.
6768	WATER TREATMENT ACID DIKE REPLACEMENT	CONSTRUCTION IS SCHEDULED TO BEGIN IN FEBRUARY.
6828	VINYL RECEIVER PIPING UPGRADE	INSTALLATION IS SCHEDULED TO BEGIN IN FEBRUARY.
6848	IMPROVED POND AERATION	ENGINEERING IS SCHEDULED TO BEGIN IN FEBRUARY.
H838	NEW PLANT FORK TRUCKS	INSTALLATION IS SCHEDULED TO BEGIN IN FEBRUARY.
L778	FRONT OFFICE EXPANSION	THE FORK TRUCKS HAVE BEEN PLACED ON ORDER AND ARE DUE IN MARCH.
A519	PLANT ELECTRICAL UPGRADE	INSTALLATION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. THESE WILL BE COMPLETED IN EARLY FEBRUARY.
A649	ENGINEERING FOR VINYL DCS	DETAILED ENGINEERING WITH LITWIN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR DECEMBER 1989.
D559	ALCOHOL TANK MODIFICATION	PRELIMINARY ENGINEERING TO DEFINE THE PROJECT SCOPE IS IN PROGRESS BY GED.
D599	BOILER AND FLUID BED LM-14P ADDITION SYSTEM	DESIGN IS IN PROGRESS WITH CONSTRUCTION SCHEDULED TO BEGIN IN MARCH.
D619	PROPANE STORAGE AREA DELUGE SYSTEM	DESIGN IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN LATE FEBRUARY.
F579	COMPOUND BOXING HOPPER MAGNETS	ENGINEERING IS SCHEDULED TO BEGIN IN MARCH.
F669	COMPOUND LINE 5 HEATED PLASTICIZER	DESIGN IS SCHEDULED TO BEGIN IN MARCH.
6569	DRYBLEND DIV. VALVE AND CHUTE REPLACEMENT	ENGINEERING IS SCHEDULED TO BEGIN IN LATE MARCH.
H509	MISCELLANEOUS CAPITAL PROJECTS < \$15M	ENGINEERING OR CONSTRUCTION IS IN PROGRESS ON 34 APPROVED PROJECTS.
H549	PVC REACTOR GEARBOX REPLACEMENT	THE NEW GEARBOX IS ON ORDER AND SCHEDULED FOR DELIVERY IN MARCH.
H589	PLANT AIR SYSTEM OPTIMIZATION	DESIGN IS IN PROGRESS AND SCHEDULED TO BE COMPLETED IN EARLY MARCH.
L529	FURNITURE AND OFFICE EQUIPMENT	ALL APPROVED EQUIPMENT IS BEING PLACED ON ORDER.

ENVIRONMENTAL - F. G. Jeanson

Water

All wastewater discharge parameters were within NPDES limits for the month of January. However, a bypass occurred during the month. Approximately 800 gallons of untreated water went to the storm sewer. This bypass happened due to the overfilling of one slurry of our blend tanks. The bypass was reported to the Mississippi State Department of Natural Resources.

Air

All of the seventy-one leaks found in the annual VCM leak survey were fixed except for two. These two leaks could not be repaired during normal operation by our Maintenance Department. Leak Repairs, Inc. has been commissioned to attempt to repair the remaining two leaks.

Superfund

Region IV EPA contacted the plant and requested entry to sample the past landfill sites. EPA will send a contractor, NUS, to do surface oil, sub-surface soil, groundwater and surface water sampling. The contractor is scheduled to arrive the week of February 6 to do the sampling. Conoco was notified of the sampling that will be done.

Waste Management

January waste shipments included:

- Two bulk loads of separator oil to Stauffer Chemical.
- One partial truckload of stabilizer spill (7 drums) and Phthalic Anhydride spill (2 drums) to Chemical Waste Management.
- Two bulk truckloads of reactor culls to Sun Polymers.

Miscellaneous

Organized and held environmental training for plant technical and operational personnel. D. L. Cohen and J. C. Ledvina trained and updated personnel in air, water, solid waste and Superfund regulations.

Attended basic comprehensive course on Environmental Regulation presented by Executive Enterprises, January 17-19.

Investigated railcar fine received in December. No records indicated innocence so fine was paid to Louisiana Office of State Police.

Attended Mississippi Manufacturer's Association Enviro Committee meeting. Meeting was held to discuss issue of fee assessment on environmental permits.

ENERGY CONSERVATION - D. A. Moore

	<u>January, 1989</u>	<u>Fiscal Y.T.D.</u>
I. <u>Energy Conservation Data</u>		
A. Unadjusted EUI	-7.36%	-3.83%
B. Adjusted EUI	-6.14%	-2.72%
C. BTU/Lb. Product	2574.33	2516.13
D. Total Energy Consumption MMM BTU	138.14	528.08
This corresponds to an adjusted CMA of	50.14%	51.47%
and an unadjusted CMA of	37.96%	39.90%

II. Plant Energy Conservation ProgramA. Maintenance

There were ten energy related items completed in January, 1989. All ten of these items were steam leak repairs.

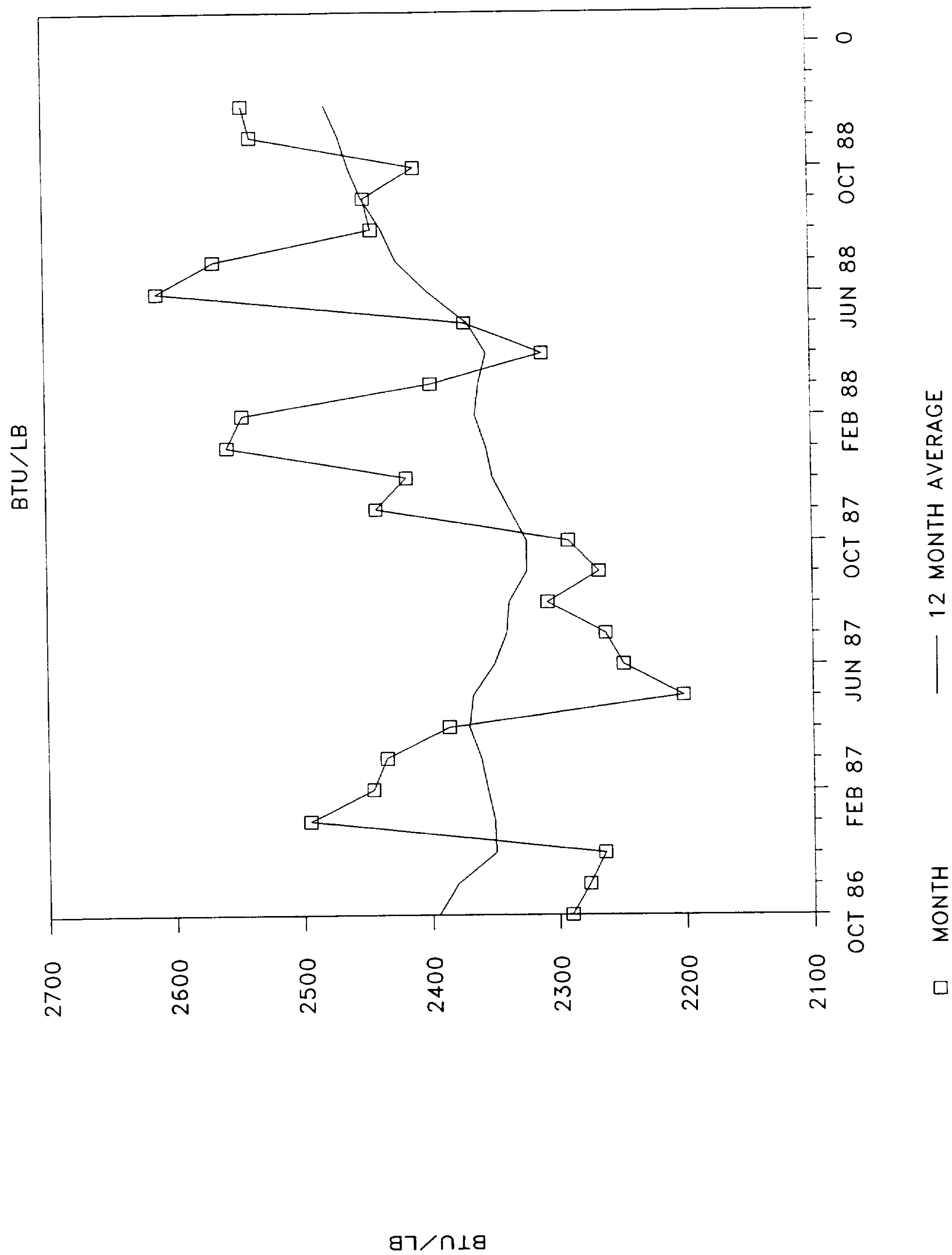
III. Boiler Operation

<u>Boiler</u>	<u>Combustion Efficiency %</u>	
	<u>Jan., 89</u>	<u>Fiscal Y.T.D.</u>
No. 1	83.84% ⁽¹⁾	83.62%
No. 2	83.64%	83.61%
No. 3	83.26%	83.22%

(1) Boiler #1 was operated six days during the month.

NOTE: The low EUI for January is largely attributed to cold weather effects.

ABERDEEN ENERGY CONSUMPTION



HUMAN RESOURCE REPORT

PERSONNEL - J. E. Beall

EMPLOYMENT

Sherry A. Ingwersen, New Hire
Douglas E. Knittig, New Hire
Thomas A. Madigan, Rehire
Andy C. Wilson, New Hire

PROMOTIONS/TRANSFERS

Veldon E. Messick promoted and transferred to Chief Process Engineer Houston, TX.
Rendell Newton promoted from Senior Process Engineer to Chief Process Engineer.
Vernon Thornhill promoted from Process Engineer to Senior Process Engineer.

RETIREMENTS

None

TERMINATIONS/RESIGNATIONS

Theresa A. Beaty

TO/FROM LEAVE OF ABSENCE

None

A

Aberdeen, Mississippi

JANUARY, 1989
MONTHLY PERSONNEL REPORT

Salaried Employees	<u>78*</u>	Minority Employees #, %								
Hourly Employees	<u>169</u>	Salaried		<u>7</u>	<u>9%</u>					
Total Employees	<u>247</u>	Hourly		<u>66</u>	<u>39%</u>					
		Total		<u>73</u>	<u>30%</u>					
<u>Employees (Hourly)</u>										
New Employees	<u>0</u>	Hourly Min. Hired		<u>0</u>						
Terminations	<u>0</u>	% Min. Hired		<u>0</u>						
		Hourly Min. Term.		<u>0</u>						
		% Min. Term.		<u>0</u>						
<u>DEPARTMENTS</u>	<u>PAR</u>	<u># EMPLOYEES</u>	<u>MIN. EMP.</u>	<u>% MIN.</u>	<u>NEW HIRES</u>	<u>YTD</u>	<u>TERM.</u>	<u>YTD</u>	<u>TURNOVER</u>	<u>YTD</u>
Warehouse	<u>16</u>	<u>16</u>	<u>7</u>	<u>44</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Gen. Plant	<u>13</u>	<u>12</u>	<u>7</u>	<u>58</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Maintenance	<u>41</u>	<u>39</u>	<u>10</u>	<u>25</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Laboratory	<u>24</u>	<u>24</u>	<u>4</u>	<u>17</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Compound	<u>40</u>	<u>40</u>	<u>26</u>	<u>65</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Vinyl	<u>33</u>	<u>33</u>	<u>10</u>	<u>30</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Plasticizer	<u>5</u>	<u>5</u>	<u>2</u>	<u>40</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Number of Applicants:

Month 12 Year to Date 12

APPLICANT BREAKDOWN:

Minority 5 % Minority 42%

Female 1 % Female 8%

Hires (Hourly):

Month 0 Year to Date 0

Terminations (Hourly):

Month 0 Year to Date 0

Overall Turnover 0

Projected Annual Turnover 0

* Includes 1 Co-op Engineer.

OVERTIME AND ABSENTEEISM

Department	Straight Time Hours Worked	Overtime Hours Worked		Overtime as a % Of Straight Time	Absence Hours Lost	Absence as a % of Straight Time		
		Controllable(1)	Non-Controllable(2)			Sickness	Other	Total F.Y.T.D.
WAREHOUSE	1295.50	97.25	-----	7.51	1	.00	.08	.08 .47
YARD	1272.00	75.50	48.00	9.71	24	1.89	.00	1.89 1.72
MAINTENANCE	4958.75	736.50	16.00	15.18	23	.00	.46	.46 2.61
LAB	3779.50	467.75	87.50	14.69	20	.00	.53	.53 2.46
COMPOUND	7012.25	630.25	232.00	12.30	65	.23	.70	.93 .90
VINYL	5771.25	265.50	176.00	7.65	97	1.46	.22	1.68 2.53
PLASTICIZER	792.00	110.25	12.00	15.44	0	.00	.00	.00 2.71
UTILITY BOILER	648.00	38.50	24.00	9.65	24	3.70	.00	3.70 2.79
GENERAL PLANT	592.00	9.75	-----	1.65	0	.00	.00	.00 .00
TOTAL	26121.25	2431.25	595.50	11.59	254	.56	.41	.97 1.91

- (1) Controllable Overtime - all overtime excluding overtime due to working regular hours on a holiday and working the sixth day in operations.
- (2) Non-Controllable Overtime - that overtime due to working regular hours on a holiday and working regular hours on the sixth day in operations.

ADMINISTRATIVE SERVICES - J. E. Little

There were no safety instances this month. Safety meetings concentrated on soliciting safety ideas to help develop FY1989 plant safety program.

Personnel/Training

Amy Vernon attended Team Management training January 17-20.

Judy Frossard and Jack Little attended AT&T's System 75 seminar January 16-20.

Cost Savings

Savings due to competitive bidding were \$9,342 for the month, and \$20,859 for FY1989.

Savings due to prompt discounts were \$1,759 for the month, and \$7,733 for FY1989.

Meetings

The department spent several days with Dave Lanciault, URC, in support of the PVC Compound Study.

Worked with Gabriel Bresler, MAC Group, January 25-26, discussing allocations to compound, variable cost, scrap, etc.

SHIPMENTS BY PRODUCT - M LBS.

Jan. 1989

FISCAL
YEAR-TO-DATE

RESIN	31,046	113,539
PLASTICIZER	533	2,668
DRYBLEND	5,793	19,216
COMPOUND	6,843	28,477
TOTAL	44,215	163,950

NUMBER OF SHIPMENTS BY MODE:

	RAILCAR	VISTA BULK	TRUCK VAN	TRAILER ON A FLAT CAR	COMMON CARRIER	CUSTOMER PICK-UP	CONTAINER	TOTAL
RESIN-Bulk	140	43				30		263
Package			5		14	5		24
Export								
PLAST.-Bulk	2	2			2			6
Package								
DRYBLEND-Bulk	29	5				4		38
Package			3		7			15
Export								
COMPOUND-Bulk	13	4						17
Package			43		39	25		107
Export			4		8			12
TOTAL JAN.	184	54	60		70	114		432
OCT. 1988	152	59	62		61	141		475
NOV. 1988	157	61	37		104	145		504
DEC. 1988	160	36	40		66	112	1	415

LABORATORY - H. G. Coleman

A. Safety - There were no injuries in the Lab this month. The monthly safety meeting, presented by Brian Harrison, included a review of ladder safety and a discussion of slip hazards.

B. Customer Relations

Customer Contacts

1/18 - Brian Harrison visited Premiere Polymers to discuss dry blend Q.C. and color matching.

1/24 - Harold Coleman accompanied John Levardsen on his calls to Lamar, Gencorp (Toledo, OH), UTC (Columbia City, IN). Of importance, quality assurance contacts were established at Lamar and a resin contamination issue was defined at Gencorp.

1/25 - Harold Coleman went with Shelly Blomquist on calls to Uniroyal Plastics and Nibco. Uniroyal presented some data relating scrap rates to high 5385 I.V.

1/26 - Brian went with Tom Davis to Vycom to discuss processing and quality concerns regarding RP-421 WHT 110.

Requests for Corrective Action

There were no RCA's received this month.

Customer Problem Reports

<u>Date</u>	<u>Customer</u>	<u>Product</u>	<u>Reason</u>
1/4	United Thermal Plastics Philadelphia, PA	269-66 BGE 141 378-34 WHT 141	Streaks. Over-lubrication.

STATUS: Product returned (nine boxes total). Work on streaking problem continues.

1/9	Klockner Gordonsville, VA	5305	Shipped them four railcars outside their desired I.V. range (.71 - .74).
-----	------------------------------	------	--

STATUS: Shifted production I.V. target and re-routed railcars.
RESOLVED.

A

LABORATORY - Continued

Customer Problem Reports - continued

<u>Date</u>	<u>Customer</u>	<u>Product</u>	<u>Reason</u>
1/16	Thermal Industries Pittsburgh, PA	378-34 WHT 142	Lumpy dry blend.

STATUS: Sample from Thermal Industries checked out good on moisture, static flow and rheometry.

1/23	Vycom Scranton, PA	RP-421 WHT 110	Inconsistent processing.
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STATUS: Torque rheometry testing of retains showed little product variability; still unresolved.

1/25	Uniroyal Plastics Mishawaka, IN	5385	High I.V. causes high rates in Ensolute.
------	------------------------------------	------	--

STATUS: Investigating process capability of meeting a .93 maximum I.V. for 5385.

Waivers Issued

<u>Customer</u>	<u>Product</u>	<u>Reason</u>	<u>No.</u>
Essex	5415	Static flow	1 H/T

C. 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 January, 1989.

	<u>Reactor Slurries</u>	<u>Drier</u> <u>5265</u>	<u>5305</u>
Number of Samples	907	26	76
Average RVCM, ppm	123	0.714	0.581

LABORATORY - ContinuedC. RVCM Summary - continuedRVCM of Shipment Samples

The following is a summary of the residual VCM analysis of shipment samples for the month of January, 1989.

<u>Product</u>	<u>Number of Samples</u>	<u>Average RVCM, ppm</u>
5265	38	0.300
5305	156	0.375
5385	27	0.487
5415	65	0.073
5465	0	---
Dry Blend	34	0.146
Debox	24	0.227
Pond	3	0.192

D. Resin Process Capabilities

	<u>5265</u>	<u>5305*</u>	<u>5385</u>	<u>5415</u>
Bulk Density	1.50	1.93	2.48	0.50
Inherent Viscosity	0.26	1.04	0.59	0.56
(vs. 0.715 - 0.754)	----	(0.63)	----	----
L Color	3.39	2.53	2.00	2.53
A Color	1.58	3.83	----	----
B Color	1.44	1.22	1.56	1.89
% on Pan	6.83	3.42	2.67	2.83
(vs. 2%, max.)	----	----	----	(0.33)
% thru 140 Mesh	1.56	1.33	1.37	2.39
Drytime	----	----	0.83	2.00
Mets I.R.	----	----	----	3.40
(vs. 95% of control)	----	----	----	2.17
Hard Particles, (% > 10)	----	----	8.2	0.90
Average particle size, microns	136.2	136.7	156.6	169.8

*Reflects recent changes in 5305 specifications.

LABORATORY - ContinuedE. Compound Quality Summary

	<u>Adjustments</u>		<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>	<u>M Lbs.</u>	<u>(%)</u>
Hardness	24.0	(0.35)	---	---
Color/Clarity	---	----	39.9	(0.58)
Hard Particles	---	----	59.3	(0.86)
Heat Stability	10.0	(0.15)	---	---
Contamination	---	----	24.7	(0.36)
Dispersion	---	----	28.3	(0.41)
Dicing	---	----	27.6	(0.40)
Cross contamination	---	----	9.0	(0.13)
Total	34.0	(0.49)	188.8	(2.74)

F. Dry Blend Quality Summary

	<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>
Stability/Torque/40 Mesh	2.4	(0.04)
Stability/Torque/Color	2.6	(0.04)
Color	3.9	(0.06)
Torque/Color	12.1	(0.18)
Total	21.0	(0.32)

G. Compound SPC Test Results

	<u>n</u>	<u>$\bar{X}$</u>	<u>3σ</u>
38401 - Hardness	62	82.98*	---
- Specific Gravity	62	1.377	.010
- Hard Particles	62	21.1	3.30
35031 - Hardness	62**	49.94	-----
- Specific Gravity	59	1.364	.005
- Hard Particles	62	5.76	2.14
Mill Temperature, °F	All readings		325
Oven Temperature, °C	62***	204.0	---

* All readings but one were 83.

** All readings but five were 50.

*** All readings but three were 204.

LABORATORY - ContinuedH. 5415 Control Resin Test Results

	<u>n</u>	<u>$\bar{X}$</u>	<u>3σ</u>
Moisture	62	0.163	0.030
Drytime	38	4.96	0.29
Particle Size - 60 mesh	61	1.38	0.65
- 80 mesh	62	29.73	3.11
- 100 mesh	61	33.84	0.95
- 120 mesh	62	21.19	1.74
- 140 mesh	61	7.21	0.83
- 200 mesh	62	5.33	1.44
Pan	61	1.31	0.38
Bulk Density	31	0.5022	0.0062
Color - L	26	100.45	0.19
A	26	-0.04	0.20
B	26	1.94	0.44
Flow Time, sec.	31	7.85	0.49
Hard Particles, 7 min.	27	5.30	3.74
Inherent Viscosity	Did not run.		

I. Miscellaneous

1. Richard Williams now has a computer with faxing capabilities for sending files and receiving all data. It functions similar to a fax machine; the extension is 3642.
2. We went to three solution rinses on the Schotte I.V. unit to completely purge the previous sample and to eliminate this bias from I.V. results.
3. Brian Harrison completed four color matches for flexible applications.
4. Brian visited Premiere Polymers on 1/18 to discuss dry blend color matching, Q.C. testing, specifications, and tolerances.
5. Brian attended Exceptional Presentations training in Houston on 1/19-20.
6. Brian participated in a discussion of impact modifiers with Rohm and Haas personnel in Ponca City on 1/31.
7. Raw material specifications were approved this month. Distribution should be complete by the end of February.
8. A new oven was purchased to dissolve I.V. samples, replacing one with faulty temperature control.

LABORATORY - Continued

I. Miscellaneous - continued

9. Our Q.C. Hunter colorimeter malfunctioned this month. Efforts to fix it were futile and it will be sent out for factory repair. Meanwhile, we are using the old Gardner unit with correction factors.
10. The old CO₂ fire protection system for our chemical store room was replaced with a Halon system.

SAMPLE SHIPMENTS

JANUARY 1989

RESIN

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
1/05/89	5385-1	400 lbs.	NAT 10 SPONGE & PLASTIC
1/05/89	5385-3P	100 lbs.	PLASTIC GROUP PHILIPINES
1/05/89	5385-1	50 lbs.	WUEMSCHE HANDELSGESELLCT
1/05/89	5385-3S	50 lbs.	SOGEPLAST
1/05/89	5385-1	300 lbs.	ARNA INDUSTRY PLASTIC
1/10/89	Sifter Overflow	2 X 5 lbs.	Wexford Int'l.
1/18/89	5415	50 lbs.	Techni-Chemicals
1/19/89	5385	1 lb.	Transamerican Chemical Corporation
1/23/89	5265	10 lbs.	Carlon
	5305	10 lbs.	
1/23/89	5305	50 lbs.	Polysar Rubber
	5415	50 lbs.	
1/31/89	Pond	1 lb.	Talco Plastics
	Debox	1 lb.	
1/31/89	Pond	1 lb.	Entis Associates
	Debox	1 lb.	
	Sifter Overflow	1 lb.	

COMPOUND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
1/11/89	14331 CB 50	50 lbs.	Times Fiber
	18931 WAT CL	50 lbs.	
1/18/89	38601 GRAY 553	1 Swatch	West Penn Wire
	38601 GRAY 571	1 Swatch	
1/18/89	322-80A NAT	2 lbs.	Ron Walker
1/19/89	16841 NAT	100 lbs.	Calvex Mfg.
1/27/89	151-160C Charcoal		
	570	100 LBS.	John Levardsen
1/31/89	46851 BLK	200 lbs.	Lord Chemical

DRY BLEND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
1/10/89	378-34 WHT 141	1500 lbs.	Davis Standard
1/12/89	378-34 WHT 141	3900 lbs.	Uniplast Int'l.
1/23/89	269-151 WHT 145	1 lb. & 1 color plaque	J. P. Industries

PLASTICIZER

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
1/10/89	VRP	5 gal.	Wexford Int'l.
1/20/89	VRP	1 gal.	Robins Tire