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To: T. H. Huffman

From: D. C. Skokna
Date: October 20, 1989

Subject: ABERDEEN MONTHLY PROGRESS REPORT
SEPTEMBER, 1989

Interoffice
Communication

VISTA

Safety

There were no injuries reported during the month. For FY1989, there were nine recordable and fifteen first aid injuries reported. As of September 30, the plant's employees completed 3,740 days (4,947,570 manhours) since the last lost time injury.

Key Statistical Information

	<u>September</u>	<u>Y.T.D.</u>
PVC Production, MM Lbs.	39.25	454.5
Reactor Stream Factor, %	94.4	89.9
Resin Quality, % Prime	94.5	95.6
VCM Efficiency, Lbs./Lb.	1.01225	1.0055
Flexible Compound Production, MM Lbs.	5.71	72.1
Flexible Compound Quality, % Prime	96.8	96.9
Rigid Compound Production, MM Lbs.	3.61	58.6
Rigid Compound Quality, % Prime	100.0	99.7
Plasticizer Production, MM Lbs.	1.33	18.3
Plasticizer Quality, % Prime	96.2	92.0
Energy Use, (EUI, %)	0.4	< 3.8>
Fixed Cost Variance, \$M	<115.9>	< 236.7>
Variable Cost Efficiency Variance, \$M	< 41.1>	1675.5

453.0
452.5

Costs

Variable costs were essentially at budget.

Fixed costs were unfavorable due to some turnaround charges, year-end accruals, and above normal purchases of operating supplies.

OMP

1. The 5415 Decontamination Team investigated causes of and solutions to the variability of product contamination. The process, sampling and analysis contribute equally to the variability. Several changes were made to reduce both the level of contamination and variability. A nested design was used to determine the sources of variation.
2. The BPA kill 5305 trial railcar failed the "graininess" test at Klockner. Two new theories have been proposed (calcium from water and fast fusion times versus the competition). These will be evaluated.

VAB.0001190338

A
T. H. Huffman

10/20/89

Aberdeen Monthly Progress Report - September, 1989

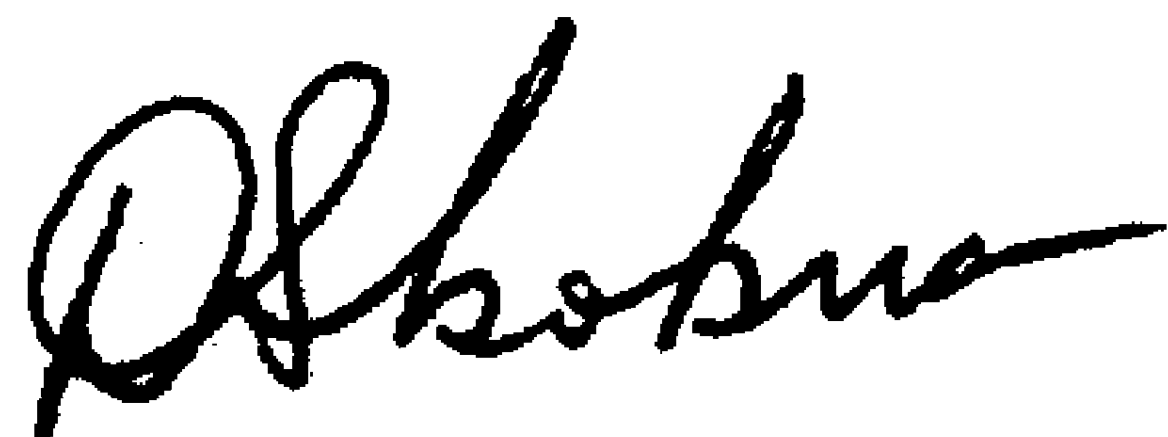
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OMP - continued

3. Sixty-one percent of the plant's natural teams met during the month; seven teams have mission statements.
4. The second Quality Appreciation Day was held to recognize the accomplishments of seven project teams.
5. The Maintenance Supervisors' Natural Team made its presentation to Management for improving small tool control.
6. The second round of SPC Expert training was completed.

Environmental

1. Alabama banned shipments of hazardous waste from Mississippi as well as from other states, effective 9/14/89. Currently, we are seeking approval to dispose of the plant's landfilled hazardous wastes at other sites. Also, plant management met with local state senators and representatives to discuss this issue. Alabama says it will lift the ban once Mississippi has or plans to have "adequate" hazardous waste disposal capacity. Short term, there is minimal plant impact.
2. The last PCB transformer was reclassified to be non-PCB. No other plant equipment is considered "PCB Contaminated".



D. C. Skokna
Plant Superintendent

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

	<u>September</u>	<u>Fiscal</u> <u>Y.T.D. 1989</u>	<u>Fiscal</u> <u>Y.T.D. 1988</u>
First Aid	0	15	13
OSHA Recordable	<u>0</u>	<u>9</u>	<u>6</u>
Total Injuries	0	24	19
Number of Restricted Workday Cases	0	3	1
Number of Lost Workday Cases	0	0	0

Injuries by Department

Vinyl Operations	0	2	5
Compound Operations	0	4	3
Maintenance	0	14	9
Laboratory	0	1	1
Receiving/Warehouse	0	1	0
Office	<u>0</u>	<u>2</u>	<u>1</u>
Totals	0	24	19

Injuries by Type

Cuts and Abrasions	0	6	7
Eye Injuries	0	2	0
Burns	0	6	6
Bruises	0	4	2
Strains/Sprains	0	4	1
Stings	0	0	0
Other	<u>0</u>	<u>2</u>	<u>3</u>
Totals	0	24	19

Non-Occupational Injuries

Lost Workday Cases	2	4	13
Days Lost	15	57	272

Safety Record

Last lost time injury - 7/5/79
Days since - 3740
Employee hours since - 4,947,570

On September 30, 1989, the employees of the Aberdeen plant completed 3740 days with no lost time injury.

The topic for plant safety meetings during the month was Annual Respirator Training.

A Safety Review Team has been organized to establish a new plant review program in the plant. It will set up a program which reviews the normal audit items as well as system safety items.

SAFETY - Continued

Another new team, the Safety Meeting Improvement Team, was formed to evaluate our present safety training meetings and seek improvement in them. Among the items discussed were meeting times and locations as well as resources to be made available.

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	77	97.5	2	2.5
Lead	5	100.0	0	0.0
Total Particulates	0	----	0	---

One of the VCM overexposures was without benefit of respiratory protection.

Monthly Injury Summary

There were no injuries reported.

QUALITY DEVELOPMENT - M. R. Kane

General

The second Quality Appreciation Day (QAD II) was held September 7 to recognize the efforts of seven teams. The teams provided displays of their completed work while plant employees enjoyed hors d'oeuvres. Each team was presented with a plaque that they will display in a plant location of their choosing. Rick Smith, Product Manager - Resin, was present and addressed the attendees about the need for continued effort improving and maintaining product quality.

The second group of SPC Experts completed their training. The group totaled about thirty bringing the numbers trained to forty-two out of two hundred fifty. Improvement in identification of assignable causes has been noted as a result of training.

The natural team scores for the second round of data showed an improvement from an average of 0.67 to an average of 1.13. Fifty percent of the plant's natural teams are meeting on a regular (monthly) basis.

Mechanical

The Maintenance Superintendent's Natural Team met with plant management to present the toolroom mechanic need and justification. The plan was approved and the remaining meetings for the month concerned development of toolroom mechanic job description/duties and selection of the mechanic.

Engineering

The process engineering 5415 Contamination Team presented the results of their nested experimental design. The conclusions were that the three components of contamination variance (process, sampling, measurement) contributed equally to the overall variance.

COST VARIANCES - D. C. SkoknaVariable Costs

<u>Product</u>	<u>September, 1989 Variance, \$M</u>		
	<u>Efficiency</u>	<u>Price</u>	<u>Total</u>
PVC	\$150.4	\$2188.0	\$2338.4
Flexible Compound	< 79.7>	326.1	246.4
Rigid Compound	< 60.7>	279.6	218.9
Plasticizer	< 51.1>	60.0	8.9
	<\$ 41.1>	\$2853.7	\$2812.6

PVC - Lower than standard raw material consumption, and variance due to product mix caused the favorable variance.

Flexible Compound - The primary cause of the variance was product mix.

Rigid Compound - The primary cause of the variance was product mix.

Plasticizer - Raw material use was above budgeted levels and "VRP" production was low - these factors caused the unfavorable variance.

Price Variances

	<u>\$M</u>
- VCM	\$2185.4
- PVC Resin to Rigid Compound	283.4
- PVC Resin to Flexible Compound	276.1
- Alfol [®]	42.7
- Purchased Plasticizers	38.6
- Alfol [®] 810AI	13.4
- TiO ₂	<11.1>
- Other Price Variances	25.2
Total	\$2853.7

Fixed Cost Variances

	<u>\$M</u>
- Payroll and Benefits	<\$ 8.2>
- MM&C	< 57.2>
- Miscellaneous	< 41.5>
- TI&D	< 6.0>
- Clearances	< 0.5>
Total	<\$113.4>

COST VARIANCES - Continued

Payroll and Benefits - This category was essentially at budget.

M. M. & C. - Year-end accruals were the primary cause of this variance.

Miscellaneous:

Unclassified - <\$9.0M> - due to VCSM related training costs.

Operating Supplies - <\$23.5M> - cooling water chemicals, turnaround related supplies, and office supplies were purchased at above budget levels.

OPERATIONS AND MECHANICAL DEPARTMENTS - P. J. Kober, D. A. Miller,
J. E. Nickerson

Operations/Mechanical Safety

Safety

The Operations and Mechanical Departments did not have any first aid or OSHA recordable injuries during the month of September.

The topic of the monthly safety meetings was the annual "Respirator Use Training".

VINYL - P. J. Kober, K. W. Birck

General

1. The new baghouse on dryer #8 was checked for leaks. Several were identified and repaired. Baghouse performance improved significantly once the leaks were plugged. Each baghouse will be similarly tested prior to startup.
2. Installation of the second dryer baghouse on dryer #7 was completed during the month as part of the dryer baghouse project. Longer than expected installation and startup problems resulted in delayed 5415 resin railcar shipments. Customer resin needs were satisfied during the delays through truck shipments and increased 5415 production once dryer #7 was restarted.
3. The 5415 Decontamination Team continued its investigation into the sources of and solutions to 5415 contamination. The main focus this month was on railcar loading, sampling and testing. Their study concluded that each area contributed equally to product variability. Several new methods have been adopted in an attempt to provide the lowest ever levels of contamination.
4. Annual rupture disc replacement was completed for the Old Module reactors.
5. A new antistat (Pationic ASZZ) was tested on 5415 resin during the month. The purpose of this test was to evaluate ASZZ both for its antistat abilities and as a way of reducing centrifuge torque (load). The test showed that at a 2500 ppm addition level there was a 34% reduction in centrifuge torque but that Mets IR was adversely affected.
6. The resin raw materials in the 744 account were valued at \$411.3M.

	<u>September</u>	<u>YTD</u>
- Production, MM Lbs.	39.3	454.5
- Daily Rate, M Lbs./C.D.	1308.4	1245.2
- Total Reactor Charges	934	10728
- Charges/C.D.	31.1	29.4
- Reactor Stream Factor, %	94.4	89.9
- Rotary Dryer Stream Factor (#4-#8), %	69.4	72.1
- Fluid Bed Dryer Stream Factor, %	98.8	94.0
- Resin Quality, % Prime	94.5	95.6

VINYL - ContinuedReactor Downtime Hours

- Operational downtime (recovery scheduling conflicts, rinsing chem wash tanks, New Module rinse/charge water conflicts, waiting on Q.C. data before charging, no place to dump and inclement weather). 292.1
- Maintenance downtime (drill condensers D700 and D745, wash out New Unit recovery condensers, replace rupture discs D400, D500, D500, repair Old Module rinse pump, replace Old Module recovery compressor and New Module recovery compressor, and miscellaneous instrument and valve repairs). 111.8

Dryer Downtime % of Total Downtime

- Reactor limited production. 74.5
- Operational downtime (centrifuge plugs, clean dryers, activator transfer problems, checking dust collector socks, power outages (4), plugged lines, and flameouts). 9.5
- Maintenance downtime (repair centrifuges (4) and motors (2), sparge pipes, shear pins, repair screeners, washout dryers and various other activator and centrifuge repairs). 4.9
- Other (dryer #7 downtime due to the baghouse replacement project). 11.1

Key Maintenance Work - J. B. Autrey, J. B. Hegwood

- The west incinerator was shut down for repairs to its downcomer tank. A new downcomer pipe, tank liner and refractor were installed. A flange section was also replaced on the burner section during this time.
- Reactors 700 and 745 were shut down during the month for hydroblasting and condenser drilling as part of the ongoing contamination control program.
- Numbers 5, 7 and 8 Birds were rebuilt during the month. These repairs were made due to worn bushings and bearings. Numbers 7 and 8 Birds were also sent out for balancing because of bad vibration problems during startup. The motors on #7 and #8 Birds were replaced also. These motors were replaced due to bad windings and bearings.

VINYL - Continued

Key Maintenance Work - continued

- The rupture discs were changed out on reactors 400, 500 and 600 as part of the annual rupture disc program.
- Number 7 dryer was shutdown during the month for repairs to its Trunion. The Trunion was frozen up and would not rotate.
- Several new style cameras were installed in the vinyl unit for testing purposes. If accepted, these new cameras will replace the existing cameras.
- There were nine major valves changed out in the vinyl area during the month.

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

General

All flexible compound lines returned to their normal operating schedules in September. This was a result of the strong demand for our flexible compounds which began late in August and continued throughout September. Most material produced was required just to meet orders. Little or no compound was made for inventory. Finished flexible compound inventory dropped from 4.8MM pounds in September to 3.9MM pounds. This type of scheduling results in shorter, less efficient production runs with higher than normal downtime for product changes.

Demand for rigid compound continued to be weak in September. The dry blend unit was down several days this month due to lack of orders for rigid compound.

A new condenser was installed on plasticizer reactor R-1 this month. This completes the plasticizer reactor condenser replacement project.

A low-smoke, low-flame compound was produced on Line I for a cable jacketing application. A sample was sent to Superior Optics for evaluation as cable jacketing on their duplex optic fiber cable.

<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	26	1725	66	23177
Line III	26	3117	120	38641
Line V	20.5	865	42	10323
Total		5707		72141
% Prime		96.8		96.9

Downtime

Hours

Line I

- Product Changes	125
- Quality Problems & Control	17
- Dicer Problems & Maintenance	8
- Miscellaneous Maintenance	12

Line III

- Product Changes	97
- Miscellaneous Maintenance	14
- Dicer Problems & Maintenance	3

Line V

- Product Changes	52
- Welex Problems & Maintenance	44
- W-P Maintenance	14
- Quality Problems & Control	6
- Startup/Shutdown	9

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	21	3613	172	58588
% Prime		100		99.7

Downtime

Hours

- Product Changes 50
- Quality Problems & Control 15
- Miscellaneous Maintenance 30

	<u>Operating Days</u>	<u>Month</u>	<u>Production (M Lbs.)</u>	
			<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Plasticizer	23	1382	60	19935
% Prime		96.2		92.0

Key Maintenance Work - J. B. Autrey, J. B. Hegwood

- The Line V twin screw extruder was shut down for repairs to its gearbox during the month. The bearings were replaced in the gearbox and put back in service. The gearbox will be overhauled as soon as the needed parts arrive.
- The west cooling tower pump, which was sent out for repairs, was put back in service. This completes the repairs to the three compound cooling tower pumps.
- The dry blend topaz unit was shut down for repairs due to a defective board.

UTILITIES - J. B. Autrey, J. B. Hegwood

- The Pall air dryer was shut down for repairs due to a poor dewpoint reading. The desiccant was changed and the inlet three-way valve was repaired.
- Numbers 1 and 2 boilers were shut down during the month for their annual PM. During this time, several piping revisions were made to both boilers as part of a capital project to improve access and maintainability of control valves.
- The number 1 vinyl cooling tower was taken out of service. The tower was dismantled and the water re-routed to #2 tower. This was done because of the deteriorating condition of #1 cooling tower.
- The fire pumps in the north pump house were shut down and new antifreeze and several preventive maintenance items were performed on each pump in order to maintain their integrity.

ENGINEERING - R. E. Polk, S. C. Hillman, C. J. McDonald

PROJECTS IN DEVELOPMENT - GENERAL

Dryer Dust Collectors

Installation of #7 dryer dust collector was completed. Stack sampling was delayed until October to allow the system to line out before testing.

5415 Contamination

The team studying 5415 contamination completed their investigation and made recommendations which will reduce contamination. The recommendations include: More frequent dryer cleaning, modifications to dryer #5 internals, modifications to dryers #4 and #5 feeders, and improvements to railcar cleaning procedures.

An experimental design showed variation in contamination is due equally to process variation, getting a representative sample from a railcar and lab testing.

5305 Graininess

A railcar of 5305 with no Isonox failed in a trial at Klockner. Efforts continue to find the source of graininess. Two new theories have been proposed: One idea suggests calcium from the water as the culprit while the other suggests faster fusion times than the competition may be the issue.

Fluid Bed Dust Reduction Test Run

A test run to reduce dry antistat dusting from the fluid bed dryer scrubber was successfully completed. The test involved adding surfactant and a foam control agent to the scrubber water so that the antistat can be removed from the air stream by the scrubber water.

ANDRESEN CHEMICAL PLANT APPROVED CAPITAL PROJECTS

APE NUMBER	PROJECT DESCRIPTION	STATUS
F786/F357	RESIN QUALITY IMPROVEMENT PROJECTS	CLOSED TO FIELD CHARGES.
A638	ALTERNATE NATURAL GAS PIPELINE	INSTALLATION IS IN PROGRESS WITH COMPLETION IN OCTOBER.
C738	PLASTICIZER REACTOR CONDENSER	INSTALLATION IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN OCTOBER.
8618	VINYL VALVE UPGRADE	INSTALLATION IS IN PROGRESS AND PLANNED FOR COMPLETION IN DECEMBER.
8688	PLASTICIZER REACTOR COOLING WATER RECYCLE	CONSTRUCTION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN OCTOBER.
8768	WATER TREATMENT ACID DIKE REPLACEMENT	INSTALLATION IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN OCTOBER.
8848	IMPROVED POND AERATION	THE PROJECT IS COMPLETE AND WILL BE CLOSED TO FIELD CHARGES IN OCTOBER.
AS19	PLANT ELECTRICAL UPGRADE	CONSTRUCTION IS 75% COMPLETE AND IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
A649	VENTS: EXHAUST SYSTEM MODERNIZATION	ENGINEERING IS IN PROGRESS.
A909	IMMEDIATE REMOVAL MODIFICATIONS	DESIGN IS IN PROGRESS WITH COMPLETION SCHEDULED FOR JANUARY.
C919	NEW WATER MILL	ENGINEERING IS IN PROGRESS WITH COMPLETION PLANNED FOR OCTOBER. INSTALLATION IS PLANNED FOR JANUARY.
8939	ALUMINA TANK MODIFICATION	CONSTRUCTION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. IT WILL BE CLOSED TO FIELD CHARGES IN OCTOBER.
8419	PROPANE STORAGE AREA DELUGE SYSTEM	ENGINEERING IS IN PROGRESS WITH COMPLETION SCHEDULED FOR OCTOBER.
8429	COMPRESSOR RELEASER TRANSFER SYSTEM	ENGINEERING IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN OCTOBER.
8439	BOILER SAFETY REVISIONS	INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR OCTOBER.
8749	LEAD HANDLING AND EXPOSURE REDUCTION	DESIGN IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN OCTOBER.
8789	INERT GAS PURGING OF PA TANKS	INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR NOVEMBER.
8849	COMPRESSOR LINE 3 BENT-BULK LEAD HANDLING	ENGINEERING IS SCHEDULED TO BEGIN IN OCTOBER.
8859	COMPRESSOR GILD BRIDGE BREAKING	ENGINEERING IS IN PROGRESS WITH COMPLETION PLANNED FOR NOVEMBER.
F379	COMPRESSOR BENDING WIPPER MAGNETS	DESIGN IS COMPLETE. BIDS WILL BE REQUESTED IN OCTOBER.
F609	PLASTICIZER FILTERS FOR LINES 1,3, AND 5	DESIGN IS COMPLETE. BIDS WILL BE REQUESTED IN OCTOBER.
F649	COMPRESSOR LINE 5 HEATED PLASTICIZER	ENGINEERING IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
F699	LOW MOLECULAR WEIGHT RESIN EXPANSION	INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR JANUARY.
F729	REACTOR REACTOR MODIFICATION REDUCTION	CONSTRUCTION IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
F739	REACTOR REACTOR MODIFICATION REDUCTION	ENGINEERING IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR JANUARY.
8549	DOUBLE END DIV. VALVE AND CRATE REPLACEMENT	DESIGN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
8639	NEW GATE VALVES	INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR JANUARY.
8719	COMPRESSOR BENDER REVISIONS	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR OCTOBER.
8739	WASTE OIL REDUCTION	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR OCTOBER.
8819	VCM BENT GLASS REPLACEMENT	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR OCTOBER.
8839	PLANT WATER RECYCLE	DESIGN IS SCHEDULED TO BEGIN IN NOVEMBER.
H309	MISCELLANEOUS CAPITAL PROJECTS < \$15M	ENGINEERING OR CONSTRUCTION IS IN PROGRESS ON 36 APPROVED PROJECTS.
H349	PVC REACTOR REACTOR REPLACEMENT	INSTALLATION IS PLANNED FOR COMPLETION BY OCTOBER.
H389	PLANT AIR SYSTEM OPTIMIZATION	CONSTRUCTION IS IN PROGRESS AND PLANNED FOR COMPLETION IN OCTOBER.
H679	PLASTICIZER REACTOR ACTIVATORS	DESIGN HAS BEEN COMPLETED. THE ACTIVATORS HAVE BEEN PLACED ON ORDER WITH DELIVERY SCHEDULED FOR NOVEMBER.
H729	TURBINE REACTOR REPLACEMENT	THE EQUIPMENT HAS BEEN PLACED ON ORDER WITH DELIVERY SCHEDULED FOR OCTOBER.
H769	PLANK INVERTER VALVE REPLACEMENT	LONG-LEAD ITEMS ARE ON ORDER. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
H809	DRIVE REACTOR REPLACEMENT	THE EQUIPMENT IS ON ORDER AND SCHEDULED FOR DELIVERY IN OCTOBER.
H829	REACTOR SYSTEM COMPRESSOR - SPARE	THE EQUIPMENT IS SCHEDULED FOR DELIVERY IN FEBRUARY 1990.
H849	COMPRESSOR LINE 1 FLOOR REPAIR	THE PROJECT IS COMPLETE AND WILL BE CLOSED TO FIELD CHARGES IN OCTOBER.
H879	ROOF UPGRADE	INSTALLATION IS 50% COMPLETE AND IN PROGRESS. COMPLETION IS PLANNED FOR DECEMBER.
L529	FURNITURE AND OFFICE EQUIPMENT	ALL APPROVED EQUIPMENT IS ON ORDER.

ENVIRONMENTAL - F. G. Jeanson

Water

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

Waste Management

Waste shipments included:

- One bulk load of floor sweep to Chemical Waste Management.
- One bulk load of separator oil to Systech in Demopolis, Alabama.

Alabama's ban on hazardous waste from Mississippi took effect on September 14, 1989. No more hazardous waste from the plant can be shipped to the Chemical Waste Management facility in Emelle, Alabama. We are currently in the process of getting our hazardous waste streams approved at the Lake Charles Chemical Waste Management facility.

We have also applied to the Mississippi DEQ for an extension to store hazardous waste an additional 30-60 days above the ninety-day storage limitation. This was done in case we have any trouble getting our wastes approved at another site.

Plant management met with our local State senators and representatives to discuss the hazardous waste disposal issue.

Samples of API sludge and pit #1 sludge were analyzed for EP toxicity. Both of these materials were found to be non-hazardous.

Air

The Mississippi DEQ was here to do an audit/inspection of all air emission points this month. We received all zeros on this visual inspection.

I set up a meeting for October 12 with Mississippi DEQ to discuss permitting issues for the VCSM Project. A NESHAP authorization will have to be obtained and reduction from a major pollution source to a minor source will be requested.

The Quarterly NESHAP Report was issued to the Mississippi DEQ.

SARA

The Aberdeen video and brochure will be updated. Scripts were reviewed and revised to include the 1988 SARA 313 emissions.

Miscellaneous

I attended the annual Vinyl Chloride Safety Association (VCSA) meeting and the Vinyl Institute (VI) Safety, Health and Environmental Committee Meeting this month. I gave a presentation on fugitive emission bagging at the VI meeting.

ENVIRONMENTAL - Continued

Miscellaneous - continued

I attended the annual Mississippi Manufacturers Association Environmental meeting.

A neighborhood complaint was received this month on PVC dust. This complaint was followed up with a couple of visits with literature on PVC and VCM, and an explanation of what we are currently doing about PVC particulate emissions. The neighbor was satisfied with our effort and no additional work will be necessary.

I attended a workshop on in-plant spill response.

The one remaining PCB transformer we had at the plant was reclassified this month to be non-PCB. No other equipment in the plant is considered PCB contaminated.

The report from Tufts University written about Vista's response to SARA 313 was reviewed. Comments will be returned to Tufts.

ENERGY CONSERVATION - D. A. Moore

September, 1989

Fiscal Y.T.D.

I. Energy Conservation Data

A. Unadjusted EUI	0.58%	-2.80%
B. Adjusted EUI	0.40%	-3.75
C. BTU/Lb. Product	2505.21	2525.51
D. Total Energy Consumption MMM BTU	125.16	1528.20
This corresponds to an adjusted CMA of 53.23%		
and an unadjusted CMA of 41.91%		
		51.89%
		40.36%

II. Plant Energy Conservation Program

A. Maintenance

There were forty-two energy related items completed in September, 1989. Thirty-six of these items were steam leak repairs. The remaining six were steam trap repairs.

B. Steam Trap Survey

The survey for vinyl and plasticizer areas identified no steam trap items for repair.

III. Boiler Operation

<u>Boiler</u>	<u>Combustion Efficiency %</u>	
	<u>Sept., 89</u>	<u>Fiscal Y.T.D.</u>
No. 1	83.31%	83.65%
No. 2	83.48%	83.48%
No. 3	83.03%	83.12%

HUMAN RESOURCE REPORT

SEPTEMBER, 1989

Personnel - J. E. Beall

Employment

Todd M. Haley, Rehire

Promotions/Transfers

Verneta Young promoted from Utility to Operator.

Retirements

Jerry Crosby

Terminations/Resignations

Lisa A. Warnock
Thomas A. Madigan

To/From Leave of Absence

Ralph D. Flipppo temporary absence to take care of International Union Business.

ABERDEEN, MISSISSIPPI

SEPTEMBER, 1989
MONTHLY PERSONNEL REPORT

Salaried Employees 79*
Hourly Employees 172
Total Employees 251

Minority Employees #, %
Salaried 7 9%
Hourly 66 38%
Total 73 29%

Employees (Hourly)

New Employees 0
Terminations 0

Hourly Min. Hired 0
% Min. Hired 0
Hourly Min. Term. 0
% Min. Term. 0

DEPARTMENTS	PAR	#EMPLOYEES	MIN. EMP.	%MIN.	NEW HIRES	YTD	TERM.	YTD	TURNOVER	YTD
Warehouse	16	15	8	53	0	0	0	0	0	0
Gen. Plant	13	16	5	31	7	7	0	0	0	0
Maintenance	41	41	10	24	0	0	0	0	0	0
Laboratory	24	23	5	22	0	0	0	0	0	0
Compound	40	39	26	67	0	0	0	0	0	0
Vinyl	33	33	10	30	0	0	0	0	0	0
Plasticizer	5	5	2	40	0	0	0	0	0	0

Number of Applicants:

Month 0 Year To Date 21

APPLICANT BREAKDOWN:

Minority 0 % Minority 0
Female 0 % Female 0

Hires (Hourly):

Month 0 Year To Date 7

Terminations (Hourly):

Month 0 Year To Date 2

Overall Turnover 0

Projected Annual Turnover 1.22

* Includes 2 Co-op Engineers.

OVERTIME AND ABSENTEEISM

<u>Department</u>	<u>Straight Time Hours Worked</u>	<u>Overtime Hours Worked</u>		<u>Overtime as a % Of Straight Time</u>	<u>Absence Hours Lost</u>	<u>Absence as a % of Straight Time</u>	
		<u>Controllable(1)</u>	<u>Non-Controllable(2)</u>			<u>Sickness</u>	<u>Other Total P.Y.T.D.</u>
WAREHOUSE	988.00	54.25		5.49	0	.00	.00 6.81
YARD	1412.00	135.50	48.00	13.00	0	.00	.00 .80
MAINTENANCE	5008.75	632.00	16.00	12.94	301	5.43	.58 6.01 3.84
LAB	3622.25	237.25	86.50	8.94	88	2.32	.11 2.43 1.55
COMPOUND	6636.50	797.00	12.00	12.19	72	.54	.54 1.08 1.31
VINYL	5573.75	791.50	208.00	17.93	62	.86	.25 1.11 1.61
PLASTICIZER	701.00	23.75	.00	3.39	48	6.85	.00 6.85 8.76
UTILITY BOILER	659.75	73.75	24.00	14.82	0	.00	.00 .00 .98
GENERAL PLANT	750.50	13.50	.00	1.80	3	.00	.40 .40 .46
TOTAL	25352.50	2758.50	394.50	12.44	572	1.92	.33 2.25 2.28

- (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

Safety

There were no safety instances this month.

Cost Savings

Savings due to competitive bidding were \$1370 for the September, and \$124,369 for FY1989.

Savings due to prompt payment discounts were \$2281 for the September, and \$25,716 for FY1989.

Warehouse - Finished Goods Inventory

Total packaged inventories are continually decreasing; however, offgrade inventories remain a serious problem.

(M Lbs.)	<u>FY1988</u>		<u>FY1989</u>	
	<u>Total</u>	<u>Offgrade</u>	<u>Total</u>	<u>Offgrade</u>
Flexible Compound	5667.5	142.7	3306.6	477.0
Rigid Compound	555.8	49.7	651.7	64.4
Resin	<u>364.7</u>	<u>28.6</u>	<u>643.1</u>	<u>83.7</u>
Total	6588.0	221.0	4601.4	625.1

Meetings

9/07/89 QAD II presentations - Administrative Services personnel were involved in three project teams: Stores Team, Office Equipment and Carrier Performance.

9/20/89 Natural Teams met to discuss mission statements.

9/28/89 A meeting was held to review AT&T audit scheduled for October 10 and 11.

9/29/89 Operations and internal/external auditors met to discuss year-end audit.

**ABERDEEN CHEMICAL PLANT
SHIPPING ANALYSIS
SEPTEMBER 1989**

A

-SHIPMENTS BY PRODUCTS-	MONTH			YTD		
	PUBLIC	IPT/ITC	EXCHANGE	PUBLIC	IPT/ITC	EXCHANGE
RESIN-BULK	21,838,920	10,865,220	0	225,301,230	124,456,799	0
RESIN-PACKAGED	553,676	0	0	6,368,384	537,350	0
FLEXIBLE COMPOUND-BULK	863,980	899,550	0	15,408,450	13,834,190	0
FLEXIBLE COMPOUND-PACKAGED	4,760,290	86,400	0	46,558,557	1,240,446	0
RIGID COMPOUND-BULK	3,772,090	0	0	46,294,030	3,867,950	0
RIGID COMPOUND-PACKAGED	252,749	0	0	5,596,588	1,551,971	0
PLASTICIZER	175,440	333,350	0	2,232,130	2,249,400	3,298,550
TOTAL	32,217,065	11,984,520	0	347,759,369	147,738,106	3,298,550

-SHIPMENTS BY MODE-

BULK:	RAILCAR	VISTA	CUSTOMER PICKUP	COMMON CARRIER	TOTAL
SEPTEMBER					
RESIN	154	0	33	73	260
FLEXIBLE COMPOUND	9	0	0	4	13
RIGID COMPOUND	19	0	6	5	30
PLASTICIZER	2	0	0	4	6
TOTAL AUGUST	184	0	39	86	309
YTD					
RESIN	1,613	447	836	172	3,068
FLEXIBLE COMPOUND	155	27	0	17	199
RIGID COMPOUND	261	66	44	14	385
PLASTICIZER	31	15	0	38	84
TOTAL YTD	2,060	555	880	241	3,736

PACKAGED:	VISTA	CUSTOMER PICKUP	COMMON CARRIER	TOFC	CONTAINER	AIR/UPS	TOTAL
SEPTEMBER							
RESIN	0	5	11	0	0	10	26
FLEXIBLE COMPOUND	0	43	84	0	0	7	134
RIGID COMPOUND	0	0	9	0	0	1	10
PLASTICIZER	0	0	0	0	0	0	0
TOTAL AUGUST	0	48	104	0	0	18	170
YTD							
RESIN	48	60	122	0	0	59	289
FLEXIBLE COMPOUND	367	365	577	1	3	27	1,340
RIGID COMPOUND	84	8	135	0	2	5	234
PLASTICIZER	0	0	3	0	0	0	3
TOTAL YTD	499	433	837	1	5	91	1,858

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LABORATORY - H. G. Coleman

- A. **Safety** - There were no safety incidences in the Laboratory this month. The monthly safety meeting was the annual respirator training provided by the Safety Department. Additionally, our Q.C. technicians and supervisor attended an eight-hour first aid course taught by Ginny Belk.
- B. **Customer Contacts** - There were no customer contacts or RCA's received this month, nor were any Customer Problems Reports recorded.
- C. **Product Waivers** - There were no product waivers issued in September.
- D. **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 September, 1989.

	Reactor <u>Slurries</u>	<u>5265</u>	<u>Drier</u> <u>5305</u>
Number of Samples	930	36	55
Average RVCM, ppm	136	1.506	1.220

RVCM of Shipment Samples

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

<u>Product</u>	<u>Number of Samples</u>	<u>Average RVCM. ppm</u>
5265	44	0.285
5305	68	0.606
5385	65	0.194
5395	0	
5415	63	0.090
5465	0	0
Dry Blend	46	0.119
Debox	20	0.172
Pond	5	0.138

- E. **Resin Process Capabilities** (based on dryer "regulars")

	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5415</u>
Bulk Density	1.60	1.15	1.90	1.33
Inherent Viscosity	0.79	0.58	0.56	0.61
(vs. 0.715 - 0.744)	----	0.27	----	----
L Color	3.05	1.57	4.22	4.44
A Color	5.33	3.33	----	----
B Color	5.33	2.33	2.67	6.33
% on Pan	1.43	1.08	2.07	2.75
(vs. 2% max.)	----	----	----	0.25

LABORATORY - ContinuedE. Resin Process Capabilities (based on dryer "regulars") - cont.

	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5415</u>
% thru 140 Mesh	0.58	0.65	2.48	2.48
Drytime	----	----	2.67	2.67
Mets I.R.	----	----	----	2.05
(vs. 95% of control)	----	----	----	1.27
Hard Particles, (% > 10)	----	----	0.9	1.8
Average particle size, microns	137	138	167	170

F. Flexible Compound Quality Summary

	<u>Adjustments</u>		<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>	<u>M Lbs.</u>	<u>(%)</u>
Hardness	39.0	(0.68)	12.1	(0.21)
Color/Clarity	----	----	78.5	(1.38)
Hard Particles	----	----	20.7	(0.36)
Dicing	----	----	16.3	(0.29)
Streamers	----	----	9.0	(0.16)
Metals	----	----	2.1	(0.04)
Totals	39.0	(0.68)	138.7	(2.43)

G. Rigid Compound Quality Summary

	<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>
Contamination	3.6	(0.10)
Total	3.6	(0.10)

H. Flexible Compound SPC Test Results

	<u>$\bar{n}$</u>	<u>$\bar{X}$</u>	<u>3σ</u>
38401 - Hardness - A Scale	26	83.88	0.61
- Specific Gravity	26	1.377	0.015
- Hard Particles - 20 sec.	26	20.69	4.71
35031 - Hardness - D Scale	26	49.85	0.61
- Specific Gravity	26	1.377	0.009
- Hard Particles - 2 min.	26	5.50	2.76
Mill Temperature, °F	26	325.4	1.02
Oven Temperature, °C	All Readings		204°C.

LABORATORY - Continued

I. 5415 Control Resin (Lot 04169) Test Results

	<u>n</u>	<u>X</u>	<u>3σ</u>
Moisture	37	0.155	0.041
Drytime	60	4.74	0.21
Particle Size - 60 mesh	60	2.14	0.67
- 80 mesh	61	40.50	2.99
- 100 mesh	60	26.25	0.57
- 120 mesh	59	17.07	1.54
- 140 mesh	60	8.68	1.06
- 200 mesh	60	4.03	1.23
Pan	60	1.33	0.46
Bulk Density	30	0.5011	0.0027
Color - L	27	100.57	0.19
A	29	0.09	0.14
B	25	1.66	0.23
Flow Time, sec.	30	7.05	0.45
Hard Particles, 5 min.	60	37.1	7.9
Hard Particles, 7 min.	60	6.1	2.5
Inherent Viscosity	26	1.0102	0.0059

J. Miscellaneous

1. We changed our retain storage container to a smaller one and re-arranged our retain shelf space. The result is that we now have six-month storage capacity for shipment retains!
2. Repeatability and reproducibility studies were performed this month on the resin contamination test (Syntron). While the results are somewhat inconclusive, there is much variability (mostly repeatability error) apparent in the test - as much as +/-10 on a group of samples averaging 13 contaminants. A separate report will be issued as more data is collected.
3. D. S. Cox performed a precision study on slurry RVCM. The 3σ control limits were +/-30 ppm on 20 repetitions of a sample that averaged 45 ppm. The observed variation is sample error rather than instrument variation.
4. Raw material specification sheets were updated this month; distribution will be done in October.
5. A sample of Occi 160, a very low molecular weight resin used in injection molding applications, was received from Premiere Polymers and tested for I.V. in duplicate at 0.490 and 0.488.

SAMPLE SHIPMENTS

SEPTEMBER 1989

RESIN

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
9/01/89	Pond Resin	50 lbs.	FABRICA DE SANDALIAS BLUE STAR
9/01/89	Pond Resin	50 lbs.	PANIMEX
9/01/89	Pond Resin	50 lbs.	GRAVINIL, S. A.
9/06/89	5385	2 lbs.	Huls America
9/07/89	Pond Resin	5 lbs.	Lastique Int'l. Corp.
9/12/89	5385	100 lbs.	OSCAR FERNANDEZ
	5415	100 lbs.	
9/13/89	5415	100 lbs.	Rubbermaid
9/13/89	5385	250 lbs.	OMAR SANTOS ESCAMILLA
9/18/89	Pond Resin	2 lbs.	Carlon
9/18/89	5415	100 lbs.	Dayton Extruded Plastics
9/19/89	5305	300 lbs.	BASF AKTIENGESELLSCHAFT
9/27/89	5305	50 lbs.	SEMBODJA HOLLAND B.V.
9/27/89	Pond Resin	100 lbs.	IFER DOMINICANA C.A.
9/28/89	5415	10 lbs.	Huls America

COMPOUND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
9/01/89	34431 NAT	50 lbs.	BICC (CARIBBEAN) LTD.
	34643 NAT	50 lbs.	
9/06/89	17462 BLK	100 lbs.	Superior Metal Products
	18162 BLK	100 lbs.	
9/07/89	36451 NAT	100 lbs.	Tandy Wire
9/13/89	9-712	50 lbs.	Conex of Georgia
	9-746	50 lbs.	
	9-803	50 lbs.	
	9-856	50 lbs.	
9/13/89	MSP-90	1500 lbs.	OMAR SANTOS ESCAMILLA

COMPOUND (Cont.)

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
9/15/89	16851 CB 50	100 lbs.	ABC Plastics
9/18/89	240-128B GRY 568	2150 lbs.	Carlon Co.
9/21/89	48562 BLK	50 lbs.	Mytox Manufacturing

DRYBLEND

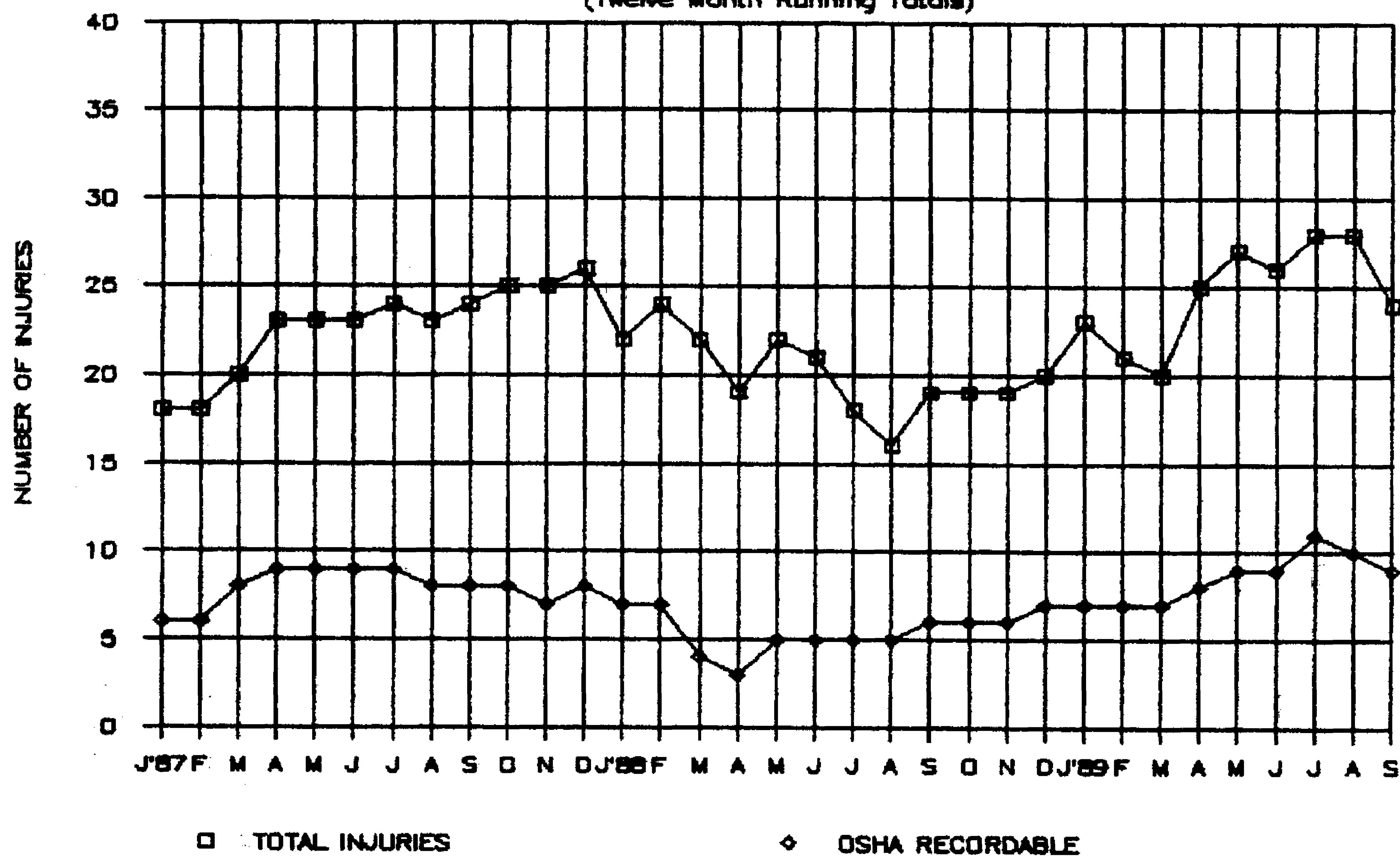
<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
9/27/89	90172D WHT 110	50 lbs.	SEMBODJA HOLLAND B.V.

PLASTICIZER

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
9/01/89	108P	1 gallon	Aristech Chemical Corp.

ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)



ABERDEEN ENERGY CONSUMPTION

BTU/LB

BTU/LB

