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To: T. H. Huffman

From: D. C. Skokna
Date: June 15, 1989

Interoffice
Communication

Subject: ABERDEEN MONTHLY PROGRESS REPORT - MAY, 1989

VISTA

Safety

There were two first aid and three OSHA recordable injuries reported in May. The first aid injuries were to a Compound Operator who bruised her foot when she dropped a wooden pallet, and a Mechanic who bruised his knee when a part was dropped from a work table. The OSHA recordable injuries were a Mechanic who pulled a groin muscle when he stepped down from a reactor head to the platform and two Mechanics who were burned on the backs of their legs when splashed with chem wash.

As of May 31, 1989, the plant's employees have worked 3,618 days or 4,763,491 manhours since the last lost time injury.

Key Statistical Information

	<u>May</u>	<u>Y.T.D.</u>
PVC Production, MM Lbs.	37.0	305.8
Reactor Stream Factor, %	85.8	90.9
Resin Quality, % Prime	96.1	96.3
VCM Efficiency, Lbs./Lb.	1.0121	1.0080
Flexible Compound Production, MM Lbs.	4.2	51.3
Flexible Compound Quality, % Prime	93.7	95.3
Rigid Compound Production, MM Lbs.	4.2	41.1
Rigid Compound Quality, % Prime	100.0	99.7
Plasticizer Production, MM Lbs.	1.5	13.9
Plasticizer Quality, % Prime	86.1	91.6
Energy Use, (EUI, %)	< 4.0>	< 4.0>
Fixed Cost Variance, \$M	9.8	<137.8>
Variable Cost Efficiency Variance, \$M	102.2	967.1

Costs

Fixed costs were essentially at budget.

The primary causes of the favorable efficiency variance were better than budgeted VCM usage and product mix effects.

OMP

- Fifty percent of the plant's natural teams met during the month.
- The first class of SPC expert training was completed in May with twelve successful graduates.

VAB.0001190467

T. H. Huffman

06/15/89

Aberdeen Monthly Progress Report - May, 1989

Page 2

OMP - continued

- An action plan was developed in response to the recent Prestolite Wire audit. The plan addresses items and areas where the audit showed we should improve.

DC Skokna/pws

D. C. Skokna
Plant Superintendent

rah

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<u>Aberdeen</u>	RWS/DCS (File Copy), PJK, JEN, MRK, DAM, JEB, HGC, JEL, REP, BLT, RBN, SCH		

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

	<u>May</u>	<u>Fiscal</u> <u>Y.T.D. 1989</u>	<u>Fiscal</u> <u>Y.T.D. 1988</u>
First Aid	2	12	7
OSHA Recordable	<u>3</u>	<u>6</u>	<u>3</u>
Total Injuries	5	18	10
Number of Restricted Workday Cases	0	2	0
Number of Lost Workday Cases	0	0	0

Injuries by Department

Vinyl Operations	0	2	1
Compound Operations	1	4	2
Maintenance	4	10	6
Laboratory	0	1	1
Receiving/Warehouse	0	0	0
Office	<u>0</u>	<u>1</u>	<u>0</u>
Totals	5	18	10

Injuries by Type

Cuts and Abrasions	0	3	4
Eye Injuries	0	0	0
Burns	2	6	3
Bruises	2	4	2
Strains/Sprains	1	3	0
Stings	0	0	0
Other	<u>0</u>	<u>2</u>	<u>1</u>
Totals	5	18	10

Non-Occupational Injuries

Lost Workday Cases	0	2	8
Days Lost	0	42	127

Safety Record

Last lost time injury - 7/5/79
Days since - 3618
Employee hours since - 4,763,491

During the month of May, there were two first aid cases and three OSHA recordable cases. The first aid cases occurred when a Compound Operator bruised her foot as she dropped a wooden pallet, and a Mechanic received a bruise on his knee when a part was dropped from a work table.

The medical treatment injuries were a Mechanic who pulled a groin muscle while stepping down from a reactor head to the platform, and two Mechanics who received caustic burns to the backs of their legs when splashed with chem wash.

SAFETY - Continued

On May 31, 1989, the employees of the Aberdeen Plant completed 3618 days with no lost time injury.

Topics for the plant safety meetings during the month included Review of Recent Injuries, Material Safety Data Sheets, Hazardous Materials Handling, and Review of Safe Work Sampling Results.

Routine dosimetry results for the month were:

<u>Chemical</u>	< PEL		> PEL	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
VCM	77	100.0	0	0.0
Lead	13	100.0	0	0.0
Total Particulates	1	100.0	0	0.0

Monthly Injury Summary

<u>Injury Class</u>	<u>Department</u>	<u>Description</u>
FA	Compound	Contusion of left foot.
FA	Maintenance	Contusion of right knee.
MT	Maintenance	Strain of left side of groin.
MT	Maintenance	Caustic burns of both legs below knees.
MT	Maintenance	Caustic burns of both legs and right hip.

QUALITY DEVELOPMENT

General

The first class of SPC expert training was completed in May. Twelve employees committed their time and effort toward improving their knowledge of SPC techniques. The second class of SPC expert training is scheduled to begin in mid-July.

A corrective action plan was developed in response to the recent Prestolite Wire audit. The plan addresses items and areas where the audit showed we were deficient. The plan is in final review and will be sent to Prestolite in mid-June.

A meeting was held with those who had been trained as team facilitators (eleven total) to determine what resources were needed in order to provide consistent facilitation to teams. An action plan is being developed.

M. R. Kane attended the annual American Society of Quality Control Congress.

Six natural teams made progress toward developing mission statements this month.

Vinyl Department

The Vinyl Superintendent's Natural Team met once during the month. The meeting agenda included a review of each of the active employee team activities during the month, progress on customer visit, exchange plans, brainstorming ideas for a mission statement, and continued work on key performance area identification and updated capability calculation.

There are three active employee teams in the department. Each team met at least once during May, 1989.

Process Engineering Department

The Chief Process Engineer's Natural Team met in May to discuss status and timing of projects. Both Senior Process Engineers' Natural Teams met in May to work on projects.

Several process engineers participated in a team facilitator follow-up meeting to discuss the progress on facilitation of plant natural and project teams.

Shop Utilization Team

The Shop Utilization Team met in May to review the two plans the separate groups came up with. The team is requesting preliminary cost estimates for each plan so they can decide which plan is more attractive with respect to space availability and costs. The team will schedule another meeting as soon as the estimates are available.

QUALITY - ContinuedPlant Manager

The Plant Manager's Natural Team met once this month. The purpose of this meeting was to review the progress on the major feedback items from the first series of QMP Managers Meetings.

COST VARIANCES - D. C. Skokna

Variable Costs

<u>Product</u>	<u>May. 1989 Variance. \$M</u>		
	<u>Efficiency</u>	<u>Price</u>	<u>Total</u>
PVC	\$ 56.1	\$ 726.4	\$ 782.5
Flexible Compound	(10.0)	152.0	142.0
Rigid Compound	49.8	195.1	244.9
Plasticizer	<u>6.3</u>	<u>30.6</u>	<u>36.9</u>
	\$102.2	\$1104.1	\$1206.3

PVC - VCM use was below budget and the variance attributed to product mix was favorable.

Flexible Compound - The variance was essentially at budget.

Rigid Compound - The month's favorable variance is primarily due to product mix.

Plasticizer - The variance was essentially at budget.

Price Variances

	<u>\$M</u>
- VCM	\$749.4
- Resin to Compound	299.2
- Alfol [®] 610	40.6
- 610P to Flexible Compound	16.7
- Pthallic Anhydride	(22.7)
- Other Price Variances	<u>20.9</u>
Total	\$1104.1

Fixed Cost Variances

	<u>\$M</u>
- Payroll and Benefits	(\$63.9)
- MM&C	59.7
- Miscellaneous	27.3
- TI&D	(11.6)
- Clearances	<u>(1.7)</u>
Total	\$ 9.8

COST VARIANCES - Continued

Payroll and Benefits - was above budget due to the holiday and benefits being above budget.

M. M. & C. - was below budget due to low contractor activity.

Miscellaneous:

- Outside Professional services	\$16.0M
- T&E	(\$12.8M)
- Moving/Home Assistance	\$20.4M

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

Operations/Mechanical Safety

Safety

There were three medical treatment cases and two first aid cases in the Operations/Mechanical Departments this month. The first aid injuries involved a Mechanic who received a bruise on his knee when a part was dropped from a work table, and a Compound Operator who bruised her foot handling a wooden skid.

One medical treatment case occurred when a mechanic stepped off a reactor head down into the platform (about a two foot step) and strained a groin muscle. The other two medical treatment cases involved a Mechanic and an Instrument Tech who were sprayed with chem wash rinse water solution and received minor first and second degree chemical and thermal burns to the legs. The investigation of this accident is in progress and will be complete in June.

The monthly safety meeting covered safe handling of hazardous chemicals. The meetings included a film covering general topics and discussion on specific hazardous chemical concerns for the various departments and areas in the plant.

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

General

1. Production was limited due to inventory control measures and VCM availability. When possible, downtime was used for maintenance.
2. A new 5415 dryer cleaning program was instituted in response to a customer problem. 5415 dryers are now cleaned every three days.
3. The resin raw materials in the 744 account were valued at \$374.9M.

	<u>May</u>	<u>YTD</u>
- Production, MM Lbs.	37.0	305.8
- Daily Rate, M Lbs./C.D.	1194	1258
- Total Reactor Charges	875	7217
- Charges/C.D.	28.2	29.7
- Reactor Stream Factor, %	85.8	90.9
- Rotary Dryer Stream Factor (#4-#8), %	59.7	74.6
- Fluid Bed Dryer Stream Factor, %	97.8	96.3
- Resin Quality, % Prime	96.1	96.3

Reactor Downtime

	<u>Hours</u>
- Operational downtime (recovery scheduling conflicts, rinsing chem wash tanks, new module rinse/charge water conflicts, waiting on QC data before charging, no place to dump, and inclement weather).	198.3
- Maintenance downtime (hydroblast D744 and D745 reactor shells and condensers, repair D400 agitator seal, repair D741 and D742 agitator gearboxes, repair new unit reactor evacuation steam jets, replace D743 condenser gasket, change screens in old unit dump screener, D744 agitator motor repairs, and miscellaneous instrument and valve repairs).	279.0
- Other downtime (reactors were idled to reduce finished product inventories and because of VCM availability).	581.1

VINYL - continued

Reactor Downtime - continued

<u>Dryer Downtime</u>	<u>% of Total Downtime</u>
- Reactor limited production	84.1
- Operational downtime (centrifuge plugs, clean dryers, activator transfer problems, checking dust collector socks, pulsing socks, check screener rings, and flameouts.	9.5
- Maintenance downtime (change #8 dust collector socks, #6 tumbler switch, #6 feed valve, and various activator and centrifuge repairs).	6.4

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

Reactor Area

- Reactor 400 was shut down for a seal change during the month. This seal was changed due to an excessive oil leak which was caused by a throttle bushing that had worn out. This seal had been in service for twenty-six months.
- Number 7 Bird centrifuge was shut down due to pluggage that developed during normal operation. While the centrifuge was down, the seals, thrust bearings and bushings were replaced.
- The old reactor unit chem wash pump was shut down for a complete overhaul during the month. The bearings, shaft, seals and the pump fluid end were replaced.
- Reactor 300 was shut down for repairs to its gearbox during the month. The gearbox input shaft seal had failed because of a problem with the fluid coupling. The seal was replaced and a spare fluid coupling was installed. The old fluid coupling will be rebuilt and used as a spare.
- Reactor 744 was shut down for hydroblasting during the month. The reactor shell was hydroblasted and the condenser drilled.
- Number 6 Bird centrifuge was shut down because of a bushing failure. The bushings were replaced and the centrifuge was put back in service.

VINYL - continuedKey Maintenance Work - continued

- Reactor 742 was shut down and the gearbox was removed because of an oil leak that had developed in the case. The leak was repaired and the gearbox was reinstalled.
- Reactor 741 was shut down and the gearbox was removed because of two seal failures. The oil seal and the input shaft seal had failed. The seals were replaced and the gearbox was reinstalled.
- Reactor 743 was shut down because of a gasket failure on the bottom of the reactor condenser. The condenser was lifted and the gasket was changed from a Monel jacketed gasket to a Flexitallic spiral wound gasket. The Flexitallic spiral wound gasket has proven to be very reliable.
- Training on the new maintenance hydraulic torque wrench was completed during the month. This torque wrench is being used as part of the reactor bolted joint program to help improve reactor bolted joint integrity.
- Reactor 744 agitator breaker was replaced during the month. The breaker would not reset after being shut off. There was no apparent reason for this failure.
- There were six major valves changed out in the reactor area during the month.

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

General

The three compound lines, dry blend, and plasticizer experienced scheduled downtime in May due to the demolition of the old compound cooling water tower. During this outage, the new condenser for plasticizer reactor R-2 was installed.

Contamination was encountered on several products using aluminum trihydrate (Aluchem AC-712K). The lab confirmed that the contamination was due to this raw material. Approximately 250M pounds of flexible compound were off-graded due to this contamination.

<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	27.5	1830	67	16423
Line III	19	2057	108	27282
Line V	5	<u>265</u>	53	<u>7616</u>
Total		4152		51321

Downtime

Hours

Line I

- Product Changes	93
- Dicer Problems & Maintenance	25
- Transfer Problems & Limitations	16
- Miscellaneous Maintenance	12
- Quality Problems & Control	11

Line III

- FCM Gearbox Maintenance	36
- Product Changes	34
- Dicer Problems & Maintenance	12
- Hydrotherm Maintenance	12
- Quality Problems & Control	7
- Miscellaneous Maintenance	6

Line V

- Product Changes	14
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COMPOUND - continued

	<u>Operating Days</u>	<u>Production (M Lbs.)</u>		
		<u>Month</u>	<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Rigid Compound	23	4245	185	41129

DowntimeHours

- Product Changes 42
- Welex Problems & Maintenance 29
- Screener Problems & Maintenance 28
- Quality Problems & Control 12
- Transfer Problems & Limitations 12
- Miscellaneous Maintenance 9

	<u>Operating Days</u>	<u>Production (M Lbs.)</u>		
		<u>Month</u>	<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Plasticizer	27	1475	55	13850

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

- The Line III FCM was shut down due to a gear failure during the month. The gearbox and the adjoining rotors were replaced with a spare. The gears were removed from the old rotor shafts and were sent to Houston for analysis. The cause of the failure has not yet been determined.
- The Line III mill was shut down for repairs to its rotary joints, which supply steam into the mill, on two different occasions during the month. The rotary joints were changed out and the mill was put back in service.
- The number one dry blend Welex was shut down during the month due to a seal failure during which time the seal and the bearings were replaced.
- The Compound and Plasticizer units were shut down for four days so that the north compound cooling tower could be demolished. The tower had been condemned and was scheduled for demolition. Also during this time, several maintenance items were taken care of in each unit.
- The south dry blend "Gump" screener was shut down and the gearbox was removed for repairs. A spare gearbox was installed and the screener was put back in service. The old gearbox will be rebuilt and kept for a spare.

Utilities - J. B. Autrey, J. B. Hegwood

- The plant was switched from number one boiler to number two boiler for three days so that several steam leaks could be repaired on number two boiler.
- The number three water well was shut down during the month because of debris that was surfacing in the water system. The well and casing were cleaned and the pump was returned to service.

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

PROJECTS IN DEVELOPMENT - GENERAL

Vinyl Control System Modernization

Taylor Instruments has been selected to supply the control system for the project. Information is being gathered to prepare project economics and the final cost estimate.

Plant Water System Revisions

Visits were made to municipal sites using each of the water treating systems under evaluation. Work on class "A" design is underway. The initial draft will be issued early in July.

IPSM Classes at Aberdeen

Several process engineers attended IPSM training held at the Best Western in Aberdeen.

Business Area Information Meeting

Rick Smith conducted an informational meeting on 5/25/89 about the Business Area for the plant engineers. The meeting focused on Business Area job functions and opportunities.

ABERDEEN CHEMICAL PLANT
APPROVED CAPITAL PROJECTS

APR NUMBER	PROJECT DESCRIPTION	STATUS
F786/F7557	RESIN QUALITY IMPROVEMENT PROJECTS	-----
A718	PLANT AIR SYSTEM MODIFICATIONS	THE SA MODULE IS OPERATIONAL WITH PUNCHLIST ITEMS IN PROGRESS.
A858	ALTERNATE NATURAL GAS PIPELINE	CONSTRUCTION IS COMPLETE EXCEPT FOR FINAL TIE-INS WHICH WILL BE COORDINATED WITH PRODUCTION OUTAGES.
C738	PLASTICIZER REACTOR CONDENSER	THE CONTRACT HAS BEEN SIGNED AND RETURNED TO GED FOR EXECUTION. ENGINEERING IS PLANNED TO BEGIN IN JUNE.
C748	RESIN RAILCAR CLEANING SYSTEM	INSTALLATION OF THE NEW CONDENSER IS COMPLETE. RETUBING OF THE REMAINING CONDENSERS WILL BE COMPLETED BY OCTOBER.
C798	RECOVERY SYSTEM PRESSURE CONTROL	CLOSED TO FIELD CHARGES.
D648	D-745 FME ADDITION SYSTEM MODIFICATIONS	CLOSED TO FIELD CHARGES.
D668	OXYGEN MONITORS	CLOSED TO FIELD CHARGES.
D618	VINYL VALVE UPGRADE	ALL VALVES HAVE BEEN PLACED ON ORDER. PROJECT COMPLETION IS PLANNED FOR NOVEMBER.
G688	PLASTICIZER EDUCTOR COOLING WATER RECYCLE	CONSTRUCTION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN JUNE.
C768	WATER TREATMENT ACID DINK REPLACEMENT	INSTALLATION IS IN PROGRESS WITH COMPLETION IN JULY.
G828	VINYL RECEIVER PIPING UPGRADE	ENGINEERING IS IN PROGRESS WITH CONSTRUCTION PLANNED FOR OCTOBER.
G848	IMPROVED POND AERATION	THE PROJECT IS COMPLETE AND WILL BE CLOSED TO FIELD CHARGES IN JUNE.
A519	PLANT ELECTRICAL UPGRADE	BIDS WILL BE REQUESTED IN MAY. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
A649	ENGINEERING FOR VINYL DCS	PCD DEVELOPMENT AND EQUIPMENT SELECTION IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN JULY.
D559	ALCOHOL TANK MODIFICATION	CONSTRUCTION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. IT WILL BE CLOSED TO FIELD CHARGES IN JULY.
D599	BOILER AND FLUID BED LM-14P ADDITION SYSTEM	CONSTRUCTION IS IN PROGRESS WITH COMPLETION PLANNED FOR AUGUST.
D619	PROPANE STORAGE AREA DELUGE SYSTEM	ENGINEERING IS IN PROGRESS WITH COMPLETION SCHEDULED FOR JUNE.
D629	COMPOUND REBLEND TRANSFER SYSTEM	ENGINEERING IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN AUGUST.
D639	BOILER SAFETY REVISIONS	DESIGN IS SCHEDULED TO BEGIN IN MARCH WITH COMPLETION IN JUNE.
D689	POND 3 PH CONTROL	INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR JULY.
D748	LEAD HANDLING AND EXPOSURE REDUCTION	DESIGN IS SCHEDULED TO BEGIN IN JULY.
D789	INERT GAS PURGING OF PA TANKS	DESIGN IS 90% COMPLETE AND SCHEDULED FOR COMPLETION IN JUNE.
F579	COMPOUND BOXING HOPPER MAGNETS	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR JUNE.
F609	PLASTICIZER FILTERS FOR LINES 1,3, AND 5	CONSTRUCTION IS SCHEDULED TO BEGIN IN JUNE WITH COMPLETION IN AUGUST.
F669	COMPOUND LINE 5 HEATED PLASTICIZER	ENGINEERING IS SCHEDULED TO BEGIN IN JUNE. PROJECT COMPLETION IS PLANNED FOR NOVEMBER.
F699	LOW MOLECULAR WEIGHT RESIN EXPANSION	ENGINEERING IS IN PROGRESS IN HOUSTON. PROJECT COMPLETION IS PLANNED FOR JANUARY 1990.
F739	DRYER NO.8 CONTAMINATION REDUCTION	ENGINEERING IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR SEPTEMBER.
F779	DRYER NO.4 CONTAMINATION REDUCTION	ENGINEERING IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR JANUARY.
G569	DRYBLEND DIV. VALVE AND CHUTE REPLACEMENT	DESIGN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR SEPTEMBER.
G659	NEW DRYER BAGHOUSES	DETAILED DESIGN IS IN PROGRESS. THE BAGHOUSES HAVE BEEN PLACED ON ORDER W/ THE FIRST SCHEDULED FOR DELIVERY IN JUNE.
G719	COMPOUND SEWER REVISIONS	DESIGN IS SCHEDULED TO BEGIN IN JULY.
G759	WASTE OIL REDUCTION	DESIGN IS SCHEDULED TO BEGIN IN JULY.
G819	VCM SIGHT GLASS REPLACEMENT	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR JULY.
H509	MISCELLANEOUS CAPITAL PROJECTS < \$15M	ENGINEERING OR CONSTRUCTION IS IN PROGRESS ON 46 APPROVED PROJECTS.
H549	PVC REACTOR GEARBOX REPLACEMENT	THE NEW GEARBOX IS ON ORDER AND SCHEDULED FOR DELIVERY IN JUNE.

ENGINEERING R.E. POLK, S.C. HILLMAN, V.L. THORNHILL

H589 PLANT AIR SYSTEM OPTIMIZATION
H679 PLASTICIZER REACTOR AGITATORS
H729 TORQUE REOMETER REPLACEMENT
H769 PLANT DIVERTER VALVE REPLACEMENT
H809 DRYER CENTRIFUGE REPLACEMENT
L529 FURNITURE AND OFFICE EQUIPMENT

BIDS ARE BEING REQUESTED. CONSTRUCTION IS PLANNED FOR COMPLETION IN AUGUST.
DESIGN HAS BEEN COMPLETED. THE AGITATORS HAVE BEEN PLACED ON ORDER WITH DELIVERY SCHEDULED FOR JULY.
THE EQUIPMENT WILL BE PLACED ON ORDER IN JUNE. PROJECT COMPLETION IS PLANNED FOR AUGUST.
LONG LEAD ITEMS ARE ON ORDER. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
THE CONVEYOR IS ON ORDER AND SCHEDULED FOR DELIVERY IN AUGUST.
ALL APPROVED EQUIPMENT IS ON ORDER.

VAB.0001190485

ENVIRONMENTAL - F. G. Jeanson

Water

All wastewater discharge parameters were within NPDES limits for the month of May. Second quarter sampling of the pond #6 Outfall for priority pollutants indicated no VCM detected and 38 ppb di-n-octyl phthalate.

Superfund

Results from samples taken by EPA in February have still not been received. Vendors have been contacted about resampling the three groundwater monitoring wells at the plant. Two quotes have been received. Work is expected to be done in July.

Air

A letter discussing our centrate water recycle project and the resulting VCM emissions from the cooling towers was sent to the State. Verbal approval from the State was received. Written approval was requested and should be received in June.

Waste/Offgrade Management

May waste shipments included:

- One bulk load of separator oil to Stauffer Chemical.
- One bulk load of lead bags to Chemical Waste Management.

Stauffer Chemical notified the plant that effective July 1 all separator oil shipments will have a fee of \$2.52/100-pounds. Previously, we only paid for shipping. I evaluated alternatives to Stauffer and found Systech in Demopolis, Alabama. I am working to get separator oil approved at Systech.

May offgrade shipments included:

- One load of reactor culls in super-sacs to Sun Polymers.

Core samples were taken off pond #2 and submitted to Mississippi State University's labs for priority pollutant analysis.

A list of all plant wastes was compiled for plant management.

ENERGY CONSERVATION - D. A. Moore

	<u>May, 1989</u>	<u>Fiscal Y.T.D.</u>
<u>I. Energy Conservation Data</u>		
A. Unadjusted EUI	-4.05%	-4.03%
B. Adjusted EUI	-5.23%	-4.87%
C. BTU/Lb. Product	2603.00%	2542.94
D. Total Energy Consumption MMM BTU	122.12	1047.53
This corresponds to an adjusted CMA of	50.73%	51.26%
and an unadjusted CMA of	39.00%	39.78%

II. Plant Energy Conservation ProgramA. Maintenance

There were fifty-seven energy related items completed in May, 1989. Fifty-two of these items were steam leak repairs. The remaining five were steam trap repairs.

III. Boiler Operation

<u>Boiler</u>	<u>Combustion Efficiency %</u>	
	<u>May, 89</u>	<u>Fiscal Y.T.D.</u>
No. 1	82.97% ⁽¹⁾	83.59%
No. 2	83.34%	83.46%
No. 3	83.14%	83.16%

(1) Boiler #1 operated two days during the month.

HUMAN RESOURCE REPORT

MAY, 1989

Personnel - J. E. Beall

Employment

Brian Aftergut, Rehire, Co-Op Engineer
Matthew Smith, New Hire, Summer Engineer

Promotions/Transfers

None

Retirements

None

Terminations/Resignations

Thomas E. Bales, Yard "A" Operator, Deceased

To/From Leave of Absence

None

ABERDEEN, MISSISSIPPI

MAY, 1989

MONTHLY PERSONNEL REPORT

Salaried Employees 78*Hourly Employees 175Total Employees 253

Minority Employees #, %

Salaried 7 9%Hourly 67 38%Total 74 29%Employees (Hourly)New Employees 0Terminations 0Hourly Min. Hired 0% Min. Hired 0Hourly Min. Term. 0% Min. Term. 0DEPARTMENTS PAR #EMPLOYEES MIN. EMP. %MIN. NEW HIRES YTD TERM. YTD. TURNOVER YTD.

Warehouse	<u>16</u>	<u>15</u>	<u>7</u>	<u>47</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>17</u>	<u>6</u>	<u>35</u>	<u>0</u>	<u>7</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>5</u>	<u>21</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Compound	<u>40</u>	<u>42</u>	<u>27</u>	<u>64</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 0 Year To Date 21

Hires (Hourly):

Month 0 Year To Date 7

APPLICANT BREAKDOWN:

Minority 0 % Minority 0# Female 0 % Female 0

Terminations (Hourly):

Month 1 Year To Date 1Overall Turnover .6%Projected Annual Turnover 1.4%

* Includes 1 Co-op Engineer and 1 Summer Engineer.

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 F.Y.T.D.</u>
WAREHOUSE	1421.50	28.75	-----	2.02	202	14.07	.14 14.21 5.46
YARD	1680.00	229.50	48.00	16.52	0	.00	.00 1.00
MAINTENANCE	6102.75	480.00	20.00	8.19	66	.39	.69 1.08 2.79
LAB	4559.50	330.50	62.00	8.60	15	.00	.33 .33 .05
COMPOUND	8477.00	209.50	12.00	2.61	104	.42	.80 1.22 1.23
VINYL	7349.25	653.00	208.00	11.72	35	.00	.47 .47 1.57
PLASTICIZER	726.00	155.50	-----	21.42	218	28.10	1.93 30.03 8.01
UTILITY BOILER	732.00	109.25	24.00	18.20	0	.00	.00 1.34
GENERAL PLANT	1034.25	33.50	-----	3.24	8	.00	.77 .77 .12
TOTAL	32082.25	2229.50	374.00	8.12	640	1.45	.54 1.99 2.06

(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. LittleSafety

There were no safety instances this month. Concluded review of dock area - portable safety barriers will be used to alert employees during truck loadings.

Cost Savings

Savings due to competitive bidding were \$9775 for the month, and \$82,784 for FY1989.

Savings due to prompt payment discounts were \$2347 for the month, and \$15,494 for FY1989.

Warehouse - Finished Goods Inventory

Concerns with overcrowding in the finished goods warehouse were alleviated in May with a 1,108M inventory reduction. However, slow moving and offgrade inventories are still excessive. May inventories were as follows:

	<u>Total</u>	<u>Slow Moving</u>	<u>Offgrade</u>
Flexible Compound	4,780,727	970,624	474,637
Rigid Compound	601,189	230,406	99,377
Resin	<u>852,764</u>	<u>N/A</u>	<u>211,764</u>
Total	6,234,680	1,201,030	785,778

Training

Jack Little attended "IPSM" May 17-18, 1989, at the Aberdeen Best Western.

Meetings

Jack Little was in Boston May 22-23, 1989, to review computer software in conjunction with "Oasis". (Marcam and Software 2000).

ABERDEEN CHEMICAL PLANT
SHIPPING ANALYSIS
MAY 1989

-SHIPMENTS BY PRODUCTS-	MONTH			YTD		
	PUBLIC	IPT/ITC	EXCHANGE	PUBLIC	IPT/ITC	EXCHANGE
RESIN-BULK	20,359,880	10,873,609		140,490,150	92,761,929	
RESIN-PACKAGED	417,500	47,450		4,012,100	366,450	
FLEXIBLE COMPOUND-BULK	1,688,130	1,033,250		12,218,560	10,076,390	
FLEXIBLE COMPOUND-PACKAGED	3,177,835	32,193		30,878,209	841,146	
RIGID COMPOUND-BULK	3,815,250	0		30,705,450	3,867,950	
RIGID COMPOUND-PACKAGED	420,867	985,871		4,518,648	995,171	
PLASTICIZER	169,600	0	555,150	1,483,520	864,850	2,563,900
TOTAL	30,049,062	12,972,373	555,150	224,306,637	109,773,886	2,563,900

-SHIPMENTS BY MODE-

BULK:	RAILCAR	VISTA	CUSTOMER PICKUP	COMMON CARRIER	TOTAL
MAY					
RESIN	141	41	90	4	276
FLEXIBLE COMPOUND	15	2	0	0	17
RIGID COMPOUND	19	12	1	0	32
PLASTICIZER	3	0	0	4	7
TOTAL MAY	178	55	91	8	332
YTD					
RESIN	1,049	352	671	17	2,089
FLEXIBLE COMPOUND	119	25	0	3	147
RIGID COMPOUND	182	54	27	4	267
PLASTICIZER	19	15	0	20	54
TOTAL YTD	1,369	446	698	44	2,557

PACKAGED:	VISTA	CUSTOMER PICKUP	COMMON CARRIER	TOFC	CONTAINER	AIR/UPS	TOTAL
MAY							
RESIN	4	4	8			11	27
FLEXIBLE COMPOUND	36	29	26			3	94
RIGID COMPOUND	19	1	15		1		36
PLASTICIZER							0
TOTAL MAY	59	34	49	0	1	14	157
YTD							
RESIN	35	37	77			22	171
FLEXIBLE COMPOUND	297	237	336		2	8	880
RIGID COMPOUND	66	7	93		1		167
PLASTICIZER	0	0	3				3
TOTAL YTD	398	281	509	0	3	30	1,221

LABORATORY - H. G. Coleman

A. Safety - There were no safety incidents in the Lab this month. The monthly safety meeting, conducted by Richard Williams, was an excellent program taped from the Disney Channel on home safety, including fire safety, emergencies, safety inspections and safeguarding your home.

B. Customer RelationsCustomer Contacts

There were no customer contacts this month by Laboratory personnel.

C. Product Waivers

<u>Customer</u>	<u>Product</u>	<u>Reason</u>	<u>No.</u>
Essex	5415	Avg. particle size (158 μ)	1 HT

D. RVCM SummaryRVCM of In-Process Samples

The following is a summary of residual VCM results on process samples. None of the reactor daily averages exceeded 400 ppm RVCM during the month of May, 1989.

	<u>Reactor Slurries</u>	<u>Drier</u>	
		<u>5265</u>	<u>5305</u>
Number of Samples	872	23	57
Average RVCM, ppm	162	0.705	0.494

RVCM of Shipment Samples

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

<u>Product</u>	<u>Number of Samples</u>	<u>Average RVCM, ppm</u>
5265	60	0.192
5305	87	0.189
5385	42	0.185
5395	8	0.059
5415	61	0.031
5465	0	---
Dry Blend	24	0.053
Debox	20	0.225
Pond	6	0.326

LABORATORY - Continued

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

	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5395</u>	<u>5415</u>
Bulk Density	0.48	0.62	2.36	0.95	0.58
Inherent Viscosity	0.70	0.88	0.63	1.67	0.96
(vs. 0.715 - 0.744)	----	0.46	----	----	----
L Color	7.33	4.33	12.33	13.33	6.33
A Color	1.11	7.33	----	----	----
B Color	4.67	1.67	2.33	6.00	2.83
% on Pan	1.43	3.00	2.75	0.56	3.89
(vs. 2%, max.)	----	----	----	----	0.56
% thru 140 Mesh	0.79	1.64	2.47	0.30	2.79
Drytime	----	----	1.00	1.33	2.67
Mets I.R.	----	----	----	3.71	4.25
(vs. 95% of control)	----	----	----	----	2.48
Hard Particles, (% > 10)	----	----	12.3	0.0	1.0
Average particle size, microns	138	149	164	152	170

F. Compound Quality Summary

	<u>Adjustments</u>		<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>	<u>M Lbs.</u>	<u>(%)</u>
Color/Clarity	----	---	25.3	(0.60)
Hard Particles	----	---	82.7	(1.97)
Contamination	----	---	52.9	(1.26)
Dicing	----	---	5.3	(0.13)
Total			166.2	(3.96)

G. Dry Blend Quality Summary

	<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>
40 Mesh Retention	3.9	(0.09)
Total	3.9	(0.09)

H. Compound SPC Test Results

	<u>n</u>	<u>$\bar{X}$</u>	<u>3σ</u>
38401 - Hardness	41	83.80	1.04
- Specific Gravity	41	1.373	0.014
- Hard Particles	48	21.10	3.93
35031 - Hardness	44	49.80	0.85
- Specific Gravity	44	1.378	----
- Hard Particles	46	5.48	3.53
Mill Temperature, °F	44	324.9	1.04
Oven Temperature, °C	All Readings		204°C.

LABORATORY - ContinuedI. 5415 Control Resin Test Results

	n	$\bar{X}$	3σ
Moisture	61	0.172	0.33
Drytime	30	4.89	0.33
Particle Size - 60 mesh	62	1.54	0.52
- 80 mesh	62	32.64	2.81
- 100 mesh	62	33.56	1.11
- 120 mesh	62	18.08	1.57
- 140 mesh	62	7.58	0.97
- 200 mesh	62	5.16	1.17
Pan	58	1.40	0.50
Bulk Density	30	0.500	0.006
Color - L	62	100.36	0.45
A	61	-0.01	0.22
B	59	1.84	0.38
Flow Time, sec.	31	7.70	0.46
Hard Particles, 7 min.	62	6.18	3.00
Inherent Viscosity	30	1.0127	0.078

J. Miscellaneous

1. Anne Chepolis (TSR) was given some training in the Lab about methods and procedures on May 26.
2. H. G. Coleman attended IPSM on May 17-18.
3. A tape drive was installed in the compound/dry blend Q.C. computer for backup data storage.
4. The Lab ordered a new Brabender torque rheometer to replace our old Haake unit.

SAMPLE SHIPMENTS

MAY 1989

RESIN

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
5/01/89	5265	50 lbs.	Huls American, Inc.
5/03/89	5385	50 lbs.	AL-KASWA ASSOCIATES
5/03/89	5305	100 lbs.	DUPONT OF CANADA
5/03/89	5305	50 lbs.	Hoechst Celanese
5/05/89	5305	50 lbs.	Klöckner-Pentaplast
5/12/89	5265	50 lbs.	Morton Thiokol
	5305	50 lbs.	
5/18/89	5415	100 lbs.	C. ITOH AND CO.
5/18/89	5385	150 lbs.	CARGILE
5/19/89	5415	250 lbs.	SONATRACH
5/23/89	5415	50 lbs.	CABEL CORP. OF INDIA LTD.
5/25/89	5385	250 lbs.	Applied Plastics
	5395	250 lbs.	

COMPOUND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
5/01/89	MSP Pellets	5 lbs.	Ron Walker
5/05/89	38525 BLK	1500 lbs.	Times Fiber
5/07/89	38841 NAT	300 lbs.	Northern Electric
	419-33D BLK	300 lbs.	
	376FR NAT	300 lbs.	
5/18/89	18961 NAT	50 lbs.	Florida Central Extrusion
5/24/89	38931 WHT	5 lbs.	Tie Down Engineering
5/31/89	MSP-90	50 lbs.	Tackett Plastics Inc.
5/31/89	MSP-90	100 lbs.	Flex-Rite

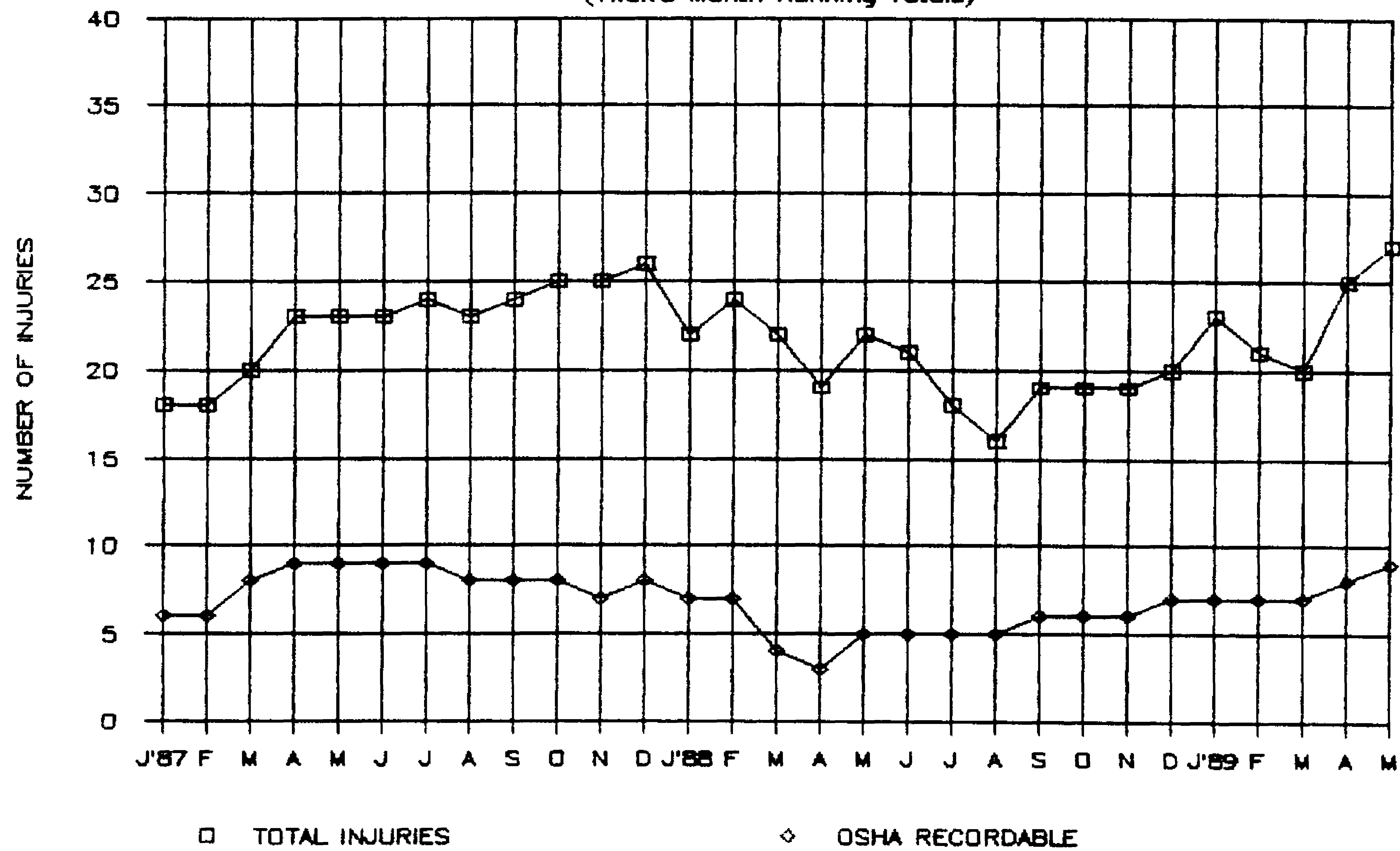
DRY BLEND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
5/16/89	80273G WHT 110	25 lbs.	Finance Int'l Trade & Service Ltd.
5/24/89	378-143 BLUE 170 Purge	30 lbs.	Silverline Building Products

VAB.0001190496

ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)



ABERDEEN ENERGY CONSUMPTION

