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To: T. H. Huffman

From: D. C. Skokna
Date: August 21, 1989

Subject: ABERDEEN MONTHLY PROGRESS REPORT - JULY, 1989

Interoffice
Communication

VISTA

Safety

There were one first aid and three recordable injuries reported during the month. The recordable injuries were a mechanic who suffered a back muscle strain, a mechanic who got a particle in his left eye, and a mechanical engineer who suffered a laceration to his left wrist. On July 5, 1989, the plant's employees reached ten years without a lost time injury. As of July 31, 1989, the plant's employees completed 3,679 days (4,857,874 manhours) since the last lost time injury.

<u>Key Statistical Information</u>	<u>July</u>	<u>Y.T.D.</u>
PVC Production, MM Lbs.	34.2	375.4
Reactor Stream Factor, %	86.1	89.3
Resin Quality, % Prime	92.6	95.8
VCM Efficiency, Lbs./Lb.	1.00299	1.00674
Flexible Compound Production, MM Lbs.	4.0	61.2
Flexible Compound Quality, % Prime	97.6	96.9
Rigid Compound Production, MM Lbs.	5.3	51.7
Rigid Compound Quality, % Prime	100.0	99.7
Plasticizer Production, MM Lbs.	1.5	17.1
Plasticizer Quality, % Prime	90.0	92.0
Energy Use, (EUI, %)	< 7.8>	< 4.8>
Fixed Cost Variance, \$M	81.6	< 27.4>
Variable Cost Efficiency Variance, \$M	235.2	1428.9

The annual old reactor module turnaround reduced resin production for the month.

Flexible compound rates were reduced due to business conditions.

Costs

Fixed costs were favorable due to reduced contractor activity.

Variable costs were favorable due to good VCM efficiencies and good efficiencies in the rigid compound unit.

OMP

- Forty-two percent of the plant's natural teams met during July. Seven natural teams have developed their mission statements.
- The second round of "SPC Expert" training began.
- The first storeroom training session was conducted by the "Stores Team".
- Southwire (a 5415 customer) visited the plant to discuss their audit program.
- A team was formed to develop solutions for the 5305 "graininess" problem.



D. C. Skokna
Plant Superintendent

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

	<u>July</u>	<u>Fiscal</u> <u>Y.T.D. 1989</u>	<u>Fiscal</u> <u>Y.T.D. 1988</u>
First Aid	1	13	9
OSHA Recordable	<u>3</u>	<u>9</u>	<u>4</u>
Total Injuries	4	22	13
Number of Restricted Workday Cases	1	3	0
Number of Lost Workday Cases	0	0	0

Injuries by Department

Vinyl Operations	0	2	3
Compound Operations	0	4	2
Maintenance	3	13	7
Laboratory	0	1	1
Receiving/Warehouse	0	0	0
Office	<u>1</u>	<u>2</u>	<u>0</u>
Totals	4	22	13

Injuries by Type

Cuts and Abrasions	1	4	6
Eye Injuries	2	2	0
Burns	0	6	4
Bruises	0	4	2
Strains/Sprains	1	4	0
Stings	0	0	0
Other	<u>0</u>	<u>2</u>	<u>1</u>
Totals	4	22	13

Non-Occupational Injuries

Lost Workday Cases	0	2	11
Days Lost	0	42	188

Safety Record

Last lost time injury - 7/5/79
Days since - 3679
Employee hours since - 4,857,874

On July 31, 1989, the employees of the Aberdeen plant completed 3679 days with no lost time injury.

Topics for the plant safety meetings during the month included: Electrical Safety, "Safety Seconds - Anatomy of a Rule-Breaker", Steam Safety, and Respirator Training.

On July 5, 1989, the Aberdeen plant reached ten years without a lost time injury. Celebration banquets will be held in August.

SAFETY - Continued

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	75	98.7	1	1.3
Lead	17	100.0	0	0.0
Total Particulates	3	100.0	0	0.0

The single overexposure to VCM was with benefit of respiratory protection.

Monthly Injury Summary

<u>Injury Class</u>	<u>Department</u>	<u>Description</u>
RWC	Maintenance	Back muscle strain.
MT	Maintenance	Resin (or insulation?) in left eye.
MT	Mechanical Eng.	Laceration of left wrist.
FA	Maintenance	Resin (or insulation?) in right eye.

QUALITY DEVELOPMENT

General

The second course of SPC Expert training was started. The course includes six one-hour classes held over a twelve-week period.

The first issue of the plant's newsletter published by the new team was issued.

Two teams were formed to plan the celebration for ten years without a lost time injury. The teams included members from all areas of the plant.

Plant Manager

The Plant Manager's Natural Team met twice in July and continued working on the identification step of the natural team process. The team has now identified its customers and suppliers. A calendar of events was developed for the Fall including safety recognition dinners, quality appreciation day, and a second round of Manager's Quality Meetings with supervisors.

Vinyl Department

The Vinyl Natural Team spent time developing team measures and reviewing process capabilities. Much time was also spent developing the operating plan to accommodate the old reactor unit shutdown.

Laboratory

Harold Coleman, Richard Williams, Billy Paul Sizemore and four shift technicians began attending the SPC Expert class in July.

Administrative Services

The Stores Team held the first storeroom education meeting with personnel from Vinyl and Compound attending.

Southwire

Southwire Company visited the plant for a tour and to discuss their vendor audit program. Contamination in 5415 is currently an issue with Southwire and was a major topic during the visit.

COST VARIANCES - D. C. SkoknaVariable Costs

<u>Product</u>	<u>July, 1989 Variance, \$M</u>		
	<u>Efficiency</u>	<u>Price</u>	<u>Total</u>
PVC	\$195.7	\$1206.6	\$1402.3
Flexible Compound	11.0	131.2	142.2
Rigid Compound	37.7	208.2	245.9
Plasticizer	< 9.2 >	32.1	22.9
	\$235.2	\$1578.1	\$1813.3

PVC - VCM usage continues below budget.

Flexible Compound - Was essentially at budget.

Rigid Compound - Low TiO₂ use versus budget and product mix effect resulted in the favorable variance.

Plasticizer - Was essentially at budget.

Price Variances

	<u>\$M</u>
- VCM	\$1198.9
- Resin to Rigid Compound	190.9
- Resin to Flexible Compound	89.3
- Alfol ^R 610	34.4
- Alfol ^R 810AI	19.1
- DIDP	13.4
- 610P	12.5
- Phthalic Anhydride	<27.8>
- Other Price Variances	47.4
Total	\$1578.1

Fixed Cost Variances

	<u>\$M</u>
- Payroll and Benefits	< 1.8 >
- MM&C	56.0
- Miscellaneous	36.5
- TI&D	5.3
- Clearances	<14.4>
Total	\$ 81.6

COST VARIANCES - Continued

Payroll and Benefits - were essentially at budget.

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

Miscellaneous:

- Outside Professional Services	\$18.2M	Favorable
- Shipping Costs	\$14.2M	Favorable
- Wastehauling	\$11.1M	Favorable

Clearances - The transportation, R&D, computer and inter-plant clearances were unfavorable.

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

Operations/Mechanical Safety

Safety

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

The Mechanical Department had one restricted workday, two medical treatment cases and one first aid injury. The RWC involved a Mechanic who pinched a nerve in his back while attempting to remove a pump. One medical treatment case involved a project engineer who cut his wrist while inspecting a new dryer baghouse. The cut required six stitches. One medical treatment case involved a Mechanic who got either resin or fiberglass insulation in his eye while working in the fluid bed dryer area. The first aid injury involved a Mechanic who got either resin or fiberglass in his eye while working in the fluid bed dryer area.

The topic of the Compound monthly safety meetings was electrical safety at work and at home. The Vinyl Department meetings covered on-the-job respirator training.

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

General

1. Production was limited in both modules for twelve hours due to an unscheduled shutdown to troubleshoot and repair an electrical distribution problem.
2. The annual Old Module shutdown was completed this month. Routine vessel inspections, necessary repairs and capital tie-ins were performed during this shutdown. The New Module was also shut down for one day so that tie-ins to common utilities could be completed.
3. Produced this month in the New Module were 5395 and 5385.
4. The resin raw materials in the 744 account were valued at \$308.0M.

	<u>July</u>	<u>YTD</u>
- Production, MM Lbs.	34.2	375.4
- Daily Rate, M Lbs./C.D.	1102	1239
- Total Reactor Charges	800	8849
- Charges/C.D.	25.8	29.2
- Reactor Stream Factor, %	86.1	89.3
- Rotary Dryer Stream Factor (#4-#8), %	72.6	73.1
- Fluid Bed Dryer Stream Factor, %	69.0	93.3
- Resin Quality, % Prime	92.6	95.8

Reactor Downtime

	<u>Hours</u>
- Operational downtime (recovery scheduling conflicts, rinsing chem wash tanks, New Module rinse/charge water conflicts, no place to dump, waiting on Q.C. data before charging and inclement weather).	349.9
- Maintenance downtime (hydroblast D700 and D745, repair D745 agitator seals, an electrical distribution failure, drill D743 condenser and miscellaneous instrument and valve repairs).	342.0
- Old Module shutdown.	945.8

VINYL - Continued

<u>Dryer Downtime</u>	<u>% of Total Downtime</u>
- Reactor limited production.	72.5
- Operational downtime (centrifuge plugs, clean dryers, activator transfer problems, checking dust collector socks, power outage, and flameouts).	9.6
- Maintenance downtime (repair activator valves, replace centrifuge sparge pipes, shear pins, wash out dryers, and various other activator and centrifuge repairs).	2.3
- Other (not needed due to Old Module shutdown).	15.0

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

The following major work items were completed during the old reactor unit shutdown.

- Reactors 300 - 700 were hydroblasted and dye checked. There were no apparent problems found during the inspection.
- The cooling water jacket on reactor 600 was repaired. This was done because of stress cracking that had developed due to the thermal expansion during normal operation.
- The evacuation stack silencer was removed and repaired. Several holes in the stack were repaired - it was then sandblasted, painted, insulated and reinstalled.
- The support structure for reactor D700 was fireproofed to bring the reactor support structure up to insurance standards.
- The condenser shells were acid cleaned on reactors 300 and 400. The slurry dump lines and the sewer lines in the unit were also acid cleaned.
- The inerts removal system was shut down and several modifications were made to the system in order to improve its operating integrity.
- All switchgear for the unit was cleaned and inspected as part of an annual inspection program.
- The pressure vessels in the unit were internally inspected. The vessels were found to be in good condition.

VINYL - Continued

Key Maintenance Work - continued

- During the month, #1 and #4 Bird motors were changed out because of bearing failures.
- Reactors 700 and 745 were shut down during the month for hydroblasting and condenser drilling as part of the contamination control program.
- Reactor 743 was shut down during the month for hydroblasting and condenser drilling due to cooling control problems.
- Number one and number six Birds were shut down during the month due to vibration problems. The bushings and bearings were changed in each to correct this problem.
- During the month, a large and a small reactor seal were rebuilt in order to have an on-hand spare.
- The maintenance painting was completed on the seven silo resin dust collectors during the month.
- There were three major valves changed out in the reactor area during the month.

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

All flexible compound lines adopted a three-shift, five-day schedule late in the month due to extremely reduced orders.

Line V experienced higher than normal downtime this month due to problems with the Orbitran controller. The inability to start up after a long shutdown was attributed to corroded electrical connections. Several Decwriter (data entry device) failures necessitated running the unit in "manual" until new Decwriters could be delivered.

The Plasticizer unit also experienced downtime for cooling water piping revisions, vacuum system repairs, and R-4 condenser replacement.

<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	23	1299	56	19843
Line III	23.5	2229	95	32871
Line V	14	<u>482</u>	34	<u>8517</u>
Total		4010		61231
% Prime		97.6		96.9

DowntimeHoursLine I

- Product Changes	51
- Mill Maintenance & Repairs	43
- Miscellaneous Maintenance	40
- Dicer Problems & Maintenance	38

Line III

- Product Changes	71
- Mill Maintenance & Repairs	23
- Dicer Problems & Maintenance	23
- Miscellaneous Maintenance	23

Line V

- Orbitran Problems & Maintenance	48
- Product Changes	38
- Miscellaneous Maintenance	14
- Quality Problems & Control	4

	<u>Operating Days</u>	<u>Production (M Lbs.)</u>		
		<u>Month</u>	<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Rigid Compound	27	5274	195	51664
% Prime		99.98		99.7

COMPOUND - Continued

<u>Downtime</u>	<u>Hours</u>
- Product Changes	45
- Quality Problems & Control	25
- Miscellaneous Maintenance	14
- Univox Problems & Maintenance	10
- Welex Problems & Maintenance	6

	<u>Operating Days</u>	<u>Production (M Lbs.)</u>		
		<u>Month</u>	<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Plasticizer	26	1451	56	17053
% Prime		90.0		92.0

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

- The Line I Banbury was shut down during the month due to a coupling failure. The coupling between the gearbox and the Banbury failed due to normal operational wear. The coupling between the motor and gearbox was changed out also.
- The Line I Banbury was shut down during the month in order to replace the pump on the hydraulic system. Plans are being made to install filters on the system in order to protect the important system components.
- The Line III mill was shut down during the month on two different occasions; once due to a coupling failure and once due to a Johnson joint failure. The coupling on the back mill roll was replaced and the Johnson joint on the front mill roll was replaced.
- The compound cooling tower was shut down during the month due to pump problems. The west pump was removed and sent out for repairs and reinstalled. The east pump was then removed and sent out for repairs. It has not been reinstalled as of this time.
- The Line V Decwriter was changed out during the month three times.

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

PROJECTS IN DEVELOPMENT - GENERAL

Compound Lead Projects Status Meeting

A meeting was held with Operations, Safety and Environmental Departments to discuss progress on defined lead exposure and waste reduction projects. Some additional items needing engineering assistance were identified.

Plasticizer Process Improvements

A meeting was held with PED and plant personnel to discuss design considerations and plan additional work needed to evaluate batch neutralization with sodium carbonate instead of caustic soda. PED is planning additional testing and equipment evaluations to develop a capital project for the second fiscal quarter, 1990.

Environmental White Paper Meeting

Plant engineering participated in a plant meeting with Paul Gowan of the Special Projects Group concerning an environmental white paper being prepared. Future environmental projects were listed and prioritized for use by Paul in developing this paper.

City Water Usage Meeting

A meeting with the Mayor of Aberdeen, city utility representatives, and plant personnel was held on July 28 to discuss the plant's current water needs and the city's supply capabilities. Plant demand for city water has increased due to supply problems with the plant's water wells. A capital project to install a new water well at the plant is being prepared.

Recruiting

Career fairs at three schools and on-campus interviews at eight schools are being scheduled for the Fall recruiting effort.

Chief Process Engineers' Meetings

Rendell Newton attended the Chief Process Engineers' annual meeting on July 26 and the Engineering Presentation to Management meeting on July 27.

ABERDEEN CHEMICAL PLANT
APPROVED CAPITAL PROJECTS

AVE NUMBER	PROJECT DESCRIPTION	STATUS
F786/F557	RESIN QUALITY IMPROVEMENT PROJECTS	THE SA MODULE IS OPERATIONAL WITH PUNCHLIST ITEMS IN PROGRESS.
A718	PLANT AIR SYSTEM MODIFICATIONS	CONSTRUCTION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. WILL BE CLOSED TO FIELD CHARGES IN AUGUST.
A858	ALTERNATE NATURAL GAS PIPELINE	ENGINEERING IS IN PROGRESS WITH COMPLETION PLANNED FOR SEPTEMBER.
C738	PLASTICIZER REACTOR CONDENSER	INSTALLATION OF THE NEW CONDENSER IS COMPLETE. RETUBING OF THE REMAINING CONDENSERS WILL BE COMPLETED BY OCTOBER.
D818	VINYL VALVE UPGRADE	INSTALLATION IS IN PROGRESS AND PLANNED FOR COMPLETION IN NOVEMBER.
G688	PLASTICIZER EDUCTOR COOLING WATER RECYCLE	CONSTRUCTION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN SEPTEMBER.
G768	WATER TREATMENT ACID DIKE REPLACEMENT	INSTALLATION IS IN PROGRESS WITH COMPLETION IN SEPTEMBER.
G828	VINYL RECEIVER PIPING UPGRADE	CONSTRUCTION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS.
G848	IMPROVED POND AERATION	THE PROJECT IS COMPLETE AND WILL BE CLOSED TO FIELD CHARGES IN SEPTEMBER.
A519	PLANT ELECTRICAL UPGRADE	CONSTRUCTION IS 50% COMPLETE AND IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
A649	ENGINEERING FOR VINYL DCS	PCD DEVELOPMENT AND EQUIPMENT SELECTION IS IN PROGRESS.
D559	ALCOHOL TANK MODIFICATION	CONSTRUCTION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. IT WILL BE CLOSED TO FIELD CHARGES IN AUGUST.
D599	BOILER AND FLUID BED LM-14P ADDITION SYSTEM	CONSTRUCTION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. FIELD CLOSURE IS PLANNED FOR AUGUST.
D619	PROPANE STORAGE AREA DELUGE SYSTEM	ENGINEERING IS IN PROGRESS WITH COMPLETION SCHEDULED FOR AUGUST.
D629	COMPOUND REBLEND TRANSFER SYSTEM	ENGINEERING IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN AUGUST.
D639	BOILER SAFETY REVISIONS	DESIGN IS COMPLETE. BIDS WILL BE AWARDED IN AUGUST.
D689	POND 3 PH CONTROL	INSTALLATION IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IS AUGUST.
D749	LEAD HANDLING AND EXPOSURE REDUCTION	DESIGN IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN SEPTEMBER.
D789	INERT GAS PURGING OF PA TANKS	DESIGN IS COMPLETE. BIDS WILL BE REQUESTED IN AUGUST.
F579	COMPOUND BOXING HOPPER MAGNETS	DESIGN IS COMPLETE. BIDS WILL BE REQUESTED IN AUGUST.
F609	PLASTICIZER FILTERS FOR LINES 1,3, AND 5	DESIGN IS COMPLETE. BIDS WILL BE REQUESTED IN AUGUST.
F669	COMPOUND LINE 5 HEATED PLASTICIZER	ENGINEERING IS IN PROGRESS. 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	CONSTRUCTION IS IN PROGRESS. THE FIRST BAGHOUSE IS SCHEDULED FOR INSTALLATION IN AUGUST.
G719	COMPOUND SEWER REVISIONS	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR SEPTEMBER.
G759	WASTE OIL REDUCTION	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR SEPTEMBER.
G819	VCM SIGHT GLASS REPLACEMENT	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR SEPTEMBER.
H509	MISCELLANEOUS CAPITAL PROJECTS < \$15K	ENGINEERING OR CONSTRUCTION IS IN PROGRESS ON 53 APPROVED PROJECTS.
H549	PVC REACTOR GEARBOX REPLACEMENT	INSTALLATION IS PLANNED FOR COMPLETION BY SEPTEMBER.
H589	PLANT AIR SYSTEM OPTIMIZATION	CONSTRUCTION IS IN PROGRESS AND PLANNED FOR COMPLETION IN SEPTEMBER.
H619	PLASTICIZER REACTOR AGITATORS	DESIGN HAS BEEN COMPLETED. THE AGITATORS HAVE BEEN PLACED ON ORDER WITH DELIVERY SCHEDULED FOR AUGUST.
H729	TORQUE RHEOMETER REPLACEMENT	THE EQUIPMENT HAS BEEN PLACED ON ORDER WITH DELIVERY SCHEDULED FOR AUGUST.
H769	PLANT DIVERTER VALVE REPLACEMENT	LONG LEAD ITEMS ARE ON ORDER. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
H809	DRYER CENTRIFUGE REPLACEMENT	THE CONVEYOR IS ON ORDER AND SCHEDULED FOR DELIVERY IN SEPTEMBER.
L52/	FURNITURE AND OFFICE EQUIPMENT	ALL APPROVED EQUIPMENT IS ON ORDER.

ENVIRONMENTAL - F. G. JeansonWater

The pH on Outfall 002 (storm water discharge) was above the daily maximum one time during the month. This pH excursion was reported to the State. The excursion was caused by run-off water from a construction site. All other wastewater discharge parameters were within NPDES limits for the month of July.

The Mississippi Department of Environmental Quality (MDEQ) was here during the month to do their annual monitoring of our wastewater outfalls. This year they are also doing bioassay testing. Results are expected in mid-August.

Permits

Written approval was received from the Mississippi Department of Environmental Quality (MDEQ) for the Low Molecular Weight Project. This project provided for an additional VCM emission source (blend tank addition) and a NESHAP authorization was submitted to have this approved by the MDEQ. However, in their correspondence with the EPA (Region IV), the EPA said a NESHAP authorization was not needed for this project because total plant emissions were not increased and therefore the project could be completed.

A letter of application for a new water well into the Eutaw aquifer was sent to the MDEQ. A new water well in the Eutaw is needed to replace capacity lost from our current well operation. The MDEQ reviewed the application. A public notice was published in the Aberdeen Examiner. The MDEQ permit board will meet on August 11, 1989 to discuss approval of the permit.

Waste/Off-Grade Management

July waste shipments included:

- One drum shipment of plasticizer filter cake and stabilizer spill to Chemical Waste Management.
- One bulk load of lead/antimony bags to Chemical Waste Management.

A program was started this month to recycle aluminum cans.

During construction work to replace the containment dike around the sulfuric acid tank, the dirt underneath the dike was found to be a hazardous waste. The dirt was considered hazardous due to its corrosive nature because of acid contamination.

Samples were taken of the dirt and sent to the hazardous waste landfill for approval. The dirt was approved at the hazardous waste landfill and will be removed in August.

A meeting was held with Sun Polymers to discuss Pond 2 and stormwater pit resin sale.

ENVIRONMENTAL - Continued

SARA

A meeting of the SARA team was set up in August to develop a plan for continuing community relations.

Superfund

The groundwater monitoring wells were resampled during the month by CH2M Hill. Results are expected in mid-August.

Air

The annual VCM flange and valve survey was completed in the Old Module before shutdown. Two leaks were found and they were both fixed during the shutdown.

Miscellaneous

An environmental audit was done on the Prairie Transport Terminal.

The Mississippi Department of Natural Resources has changed its name to the Mississippi Department of Environmental Quality.

I coordinated a meeting here in the plant with Paul Gowan to discuss environmental issues in this plant's future.

A meeting was held with the City to discuss our water usage requirements and bring them up to date on our Coker water project.

ENERGY CONSERVATION - D. A. Moore

	<u>July, 1989</u>	<u>Fiscal Y.T.D.</u>
<u>I. Energy Conservation Data</u>		
A. Unadjusted EUI	-6.90%	-3.82%
B. Adjusted EUI	-7.76%	-4.75%
C. BTU/Lb. Product	2612.30	2535.44
D. Total Energy Consumption MMM BTU	117.26	1280.90
This corresponds to an adjusted CMA of	49.61%	51.41%
and an unadjusted CMA of	37.53%	39.87%

II. Plant Energy Conservation ProgramA. Maintenance

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

III. Boiler Operation

<u>Boiler</u>	<u>Combustion Efficiency %</u>	
	<u>July, 89</u>	<u>Fiscal Y.T.D.</u>
No. 1	(1)	83.71%
No. 2	83.54%	83.48%
No. 3	83.20%	83.16%

Boiler number one was not operated during the month.

HUMAN RESOURCE REPORT

JULY, 1989

Personnel - J. E. Beall

Employment

None

Promotions/Transfers

Kenny Akins from Process Engineer to Compound Operations Engineer.

Ken Birck from Process Engineer to Vinyl Operations Engineer.

Mike Gray from Lead Technician to Maintenance Helper.

Phillip Hall promoted from Compound Utility to Compound Operator.

Frank Jeanson promoted from Environmental Coordinator to Senior Environmental Coordinator.

Charles McDonald promoted from Vinyl Operations Engineer to Senior Process Engineer.

Reed Mackay transferred from Process Engineering Houston, TX to Process Engineer Aberdeen.

Anthony Pritchett promoted from Compound Utility to Compound Operator.

Retirements

None

Terminations/Resignations

William A. Earnest
Vernon L. Thornhill, Jr.

To/From Leave of Absence

None

ABERDEEN. MISSISSIPPI

JULY, 1989
MONTHLY PERSONNEL REPORT

Salaried Employees 79*
Hourly Employees 173
Total Employees 252

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	<u>16</u>	<u>16</u>	<u>8</u>	<u>50</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Gen. Plant	<u>13</u>	<u>16</u>	<u>5</u>	<u>31</u>	<u>0</u>	<u>7</u>	<u>0</u>	<u>0</u>
Maintenance	<u>41</u>	<u>41</u>	<u>10</u>	<u>24</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Laboratory	<u>24</u>	<u>23</u>	<u>5</u>	<u>22</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Compound	<u>40</u>	<u>39</u>	<u>26</u>	<u>67</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>
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>

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 2

Overall Turnover .6%

Projected Annual Turnover 1.9%

* Includes 2 Co-op Engineers and 2 Summer 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</u>
WAREHOUSE	931.50	34.00	-----	3.65	130	13.74	.21
YARD	1351.50	62.25	48.00	8.16	17	.00	1.26
MAINTENANCE	4455.50	830.25	16.00	18.99	229	4.49	.65
LAB	3396.00	139.50	70.75	6.19	43	.00	1.27
COMPOUND	5727.25	438.25	-----	7.65	177	1.47	1.62
VINYL	5799.50	715.25	176.00	15.50	121	1.24	.84
PLASTICIZER	608.00	46.00	-----	7.57	48	7.89	.00
UTILITY BOILER	600.00	85.00	24.00	18.17	0	.00	.00
GENERAL PLANT	520.00	53.00	-----	10.19	0	.00	.00
TOTAL	23389.25	2403.50	334.75	11.71	765	2.27	1.00

- (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. The safety topic for July was "Forklift Maintenance".

Cost Savings

Savings due to competitive bidding were \$14,161 for the month, and \$121,554 for FY1989.

Savings due to prompt payment discounts were \$1780 for the month, and \$19,799 for FY1989.

Warehouse - Finished Goods Inventory

Total packaged inventories decreased 707M pounds; from 6083M pounds to 5376M pounds. Although still a problem, off-grade inventories decreased 94M pounds - 802M pounds to 708M pounds.

Training

The Stores Team conducted their first training session July 27, 1989. Attendees were Albert Barr, James Howell, Terry Noland, Bill Davis, Charles Worlow, Don Johnson, Pat Wells, and Mike Swierc.

Meetings

The month of July was replete with budgeting and making plans to close the transportation terminal.

7/17/89 We met with Bob Seymour to discuss dispatching. During the interim, the plant will arrange packaged shipments while the terminal will handle bulk loads.

7/21/89 We visited the terminal to identify any equipment/furniture that could be used by the plant. Transfers should be finalized in August.

7/24/89 Dean Honeycutt, Johnny Williams, Jack Little and John Farrier visited Ergon's offices in Jackson, MS. This was a get-acquainted session, review their operations and iron out details of the new contract bulk carrier.

7/25/89 Ergon was in Aberdeen to meet plant personnel and discuss bulk operations.

7/25 & 7/26 Jack Little was in Houston for the "OASIS" presentation. Presentations were made by Marcam and System 2000.

ABERDEEN CHEMICAL PLANT
SHIPPING ANALYSIS
JULY 1989

-SHIPMENTS BY PRODUCTS-	MONTH			YTD		
	PUBLIC	IPT/ITC	EXCHANGE	PUBLIC	IPT/ITC	EXCHANGE
RESIN-BULK	17,931,587	4,318,250		174,977,717	104,913,579	
RESIN-PACKAGED	455,764	47,150		5,342,150	413,600	
FLEXIBLE COMPOUND-BULK	512,070	730,200		13,319,680	11,866,190	
FLEXIBLE COMPOUND-PACKAGED	2,931,904	0		37,439,226	1,067,646	
RIGID COMPOUND-BULK	3,720,880	0		39,369,460	3,867,950	
RIGID COMPOUND-PACKAGED	220,272	0		5,169,420	1,551,971	
PLASTICIZER	176,670	533,750	185,550	1,966,350	1,559,500	2,749,450
TOTAL	25,949,147	5,629,350	185,550	277,584,003	125,240,436	2,749,450

-SHIPMENTS BY MODE-

BULK:	RAILCAR	VISTA	CUSTOMER PICKUP	COMMON CARRIER	TOTAL
\$JULY\$					
RESIN	115	31	24	6	176
FLEXIBLE COMPOUND	6	1	0	2	9
RIGID COMPOUND	18	2	1	0	21
PLASTICIZER	4	0	0	4	8
TOTAL JULY	143	34	25	12	214

\$YTD\$					
RESIN	1,278	447	761	27	2,513
FLEXIBLE COMPOUND	135	27	0	5	167
RIGID COMPOUND	226	66	32	5	329
PLASTICIZER	24	15	0	32	71
TOTAL YTD	1,663	555	793	69	3,080

PACKAGED:	VISTA	CUSTOMER PICKUP	COMMON CARRIER	TOFC	CONTAINER	AIR/UPS	TOTAL
\$JULY\$							
RESIN	1	5	8	0	0	10	24
FLEXIBLE COMPOUND	36	19	29	1	0	0	85
RIGID COMPOUND	10	0	7	0	0	0	17
PLASTICIZER							0
TOTAL JULY	47	24	44	1	0	10	126

\$YTD\$							
RESIN	40	48	97	0	0	40	225
FLEXIBLE COMPOUND	367	286	410	1	3	14	1,081
RIGID COMPOUND	84	8	117	0	2	0	211
PLASTICIZER	0	0	3	0	0	0	3
TOTAL YTD	491	342	627	1	5	54	1,520

LABORATORY - H. G. Coleman

- A. Safety - There were no safety incidents in the Lab this month. H. G. Coleman coordinated July's safety meeting which featured a video tape entitled "Hazards of Steam" and a safety seconds film, "Anatomy of a Rule-Breaker".

B. Customer RelationsCustomer Contacts

7/19/89 Southwire representatives were hosted. Our standard presentation was given and they were given a Syntron vibrating tray for measuring resin contamination. Work continues in an effort to resolve the contamination issue with 5415 resin.

7/20/89 Harold Coleman participated on a conference call with John Helwig of Essex and J. C. Levardsen concerning Essex's proposed 5415 specification. A subsequent memo was written summarizing our recommendations.

7/25/89 Richard Williams visited BP Performance Polymers in Visalia, CA, to discuss quality control methods, specifications and plasticizer cross-contamination for Vista flexible compounds.

C. Product Waivers

<u>Customer</u>	<u>Product</u>	<u>Reason</u>	<u>No.</u>
Chelsea Building Products	RP-166 WHT 144	% Retained on 40 Mesh	1 RC
Dayton Extruded Plastics	RP-151 WHT 145	% Retained on 40 Mesh	1 RC
Vycom	RP-421 WHT 110	% Retained on 40 Mesh	1 RC

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 July, 1989.

	<u>Reactor Slurries</u>	<u>Drier</u>	
		<u>5265</u>	<u>5305</u>
Number of Samples	798	34	57
Average RVCM, ppm	158	0.322	0.595

LABORATORY - Continued

D. RVCM Summary - continued

RVCM of Shipment Samples

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

<u>Product</u>	<u>Number of Samples</u>	<u>Average RVCM, ppm</u>
5265	37	0.122
5305	88	0.135
5385	45	0.179
5395	8	0.031
5415	51	0.046
5465	0	0
Dry Blend	58	0.043
Debox	42	0.350
Pond	8	0.736

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	1.17	0.29	1.31	1.07	1.23
Inherent Viscosity	0.83	1.60	1.00	0.89	1.05
(vs. 0.715 - 0.744)	----	0.93	----	----	----
L Color	5.25	3.25	4.00	12.33	6.33
A Color	5.33	7.33	----	----	----
B Color	4.67	1.89	2.17	2.83	2.83
% on Pan	1.72	2.33	2.07	1.61	1.89
(vs. 2%, max.)	----	----	----	----	0.22
% thru 140 Mesh	0.70	0.89	1.40	0.99	2.33
Drytime	----	----	2.33	1.17	3.00
Mets I.R.	----	----	----	3.43	3.04
(vs. 95% of control)	----	----	----	----	2.06
Hard Particles, (% > 10)	----	----	0.8	----	7.7
Average particle size, microns	138	146	161	152	174

LABORATORY - ContinuedF. Flexible Compound Quality Summary

	<u>Adjustments</u>		<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>	<u>M Lbs.</u>	<u>(%)</u>
Hardness	5.0	(0.12)	-----	-----
Color/Clarity	15.0	(0.37)	34.6	(0.86)
Hard Particles	---	---	10.1	(0.25)
Dicing	---	---	16.9	(0.42)
Heat Stability	<u>14.0</u>	<u>(0.35)</u>	<u>----</u>	<u>----</u>
Totals	34.0	(0.85)	61.6	(1.54)

G. Rigid Compound Quality Summary

		<u>Rejections</u>	
		<u>M Lbs.</u>	<u>(%)</u>
40 Mesh Retention		<u>5.2</u>	<u>(0.10)</u>
Total		5.2	(0.10)

H. Flexible Compound SPC Test Results

	<u>n</u>	<u>X</u>	<u>3σ</u>
38401 - Hardness - A Scale	34	83.82	0.94
- Specific Gravity	34	1.376	0.013
- Hard Particles - 20 sec.	34	21.00	3.68
35031 - Hardness - D Scale	34	49.88	0.63
- Specific Gravity	34	1.374	0.010
- Hard Particles - 2 min.	34	6.15	3.29
Mill Temperature, °F	All Readings		325°F.
Oven Temperature, °C	All Readings		204°C.

I. 5415 Control Resin (Lot 04169) Test Results

	<u>n</u>	<u>X</u>	<u>3σ</u>
Moisture	12**	0.155	0.036
Drytime	62	4.75	0.29
Particle Size - 60 mesh	62	2.08	0.53
- 80 mesh	20*	42.41	3.45
- 100 mesh	20*	23.79	1.00
- 120 mesh	62	18.00	2.13
- 140 mesh	62	7.25	1.02
- 200 mesh	62	5.14	1.35
Pan	61	1.28	0.45
Bulk Density	30	0.4998	0.0059
Color - L	62	100.32	0.27

LABORATORY - Continued

I. 5415 Control Resin (Lot 04169) Test Results - continued

	<u>n</u>	<u>X</u>	<u>3σ</u>
Color A	43	-0.03	0.25
B	45	1.91	0.50
Flow Time, sec.	31	7.26	0.39
Hard Particles, 7 min.	60	6.15	2.43
Inherent Viscosity	29	1.0120	0.0056

* New 80 mesh screen installed on 7/22.

** Moisture analyzer recalibrated 7/26.

J. Miscellaneous

1. D. S. Cox and Coulter service representatives started up the R&D particle size analyzer. D. S. Cox issued a memo summarizing an initial variability study. Work continues in monitoring each reactor for particle size control.
2. H. G. Coleman and D. S. Cox participated in a Plasticizer Improvement meeting on July 25.

SAMPLE SHIPMENTS

JULY 1989

RESIN

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
7/06/89	Pond Resin	2 lbs.	RESINAS Y MATERIALES
7/06/89	5385-1	50 lbs.	ANDROMEDA INTERNACIONAL
7/12/89	5415	50 lbs.	Polimex
7/12/89	Pond Resin	50 lbs.	EDCO FORWARDING
7/12/89	5385	50 lbs.	ICC TRADING (TAIWAN) LTD.
7/12/89	5385	50 lbs.	I.C.C. (HONG KONG)
7/13/89	5385	50 lbs.	JOHN CROWLEY
7/18/89	5265	450 lbs.	INTERPLAST
7/19/89	Pond Resin	100 lbs.	PLASTICOS DEL PACIFICO
7/19/89	Pond Resin	50 lbs.	DIDESA
7/24/89	5305	500 lbs.	BASF AKTIENGESELLSCHAFT

COMPOUND

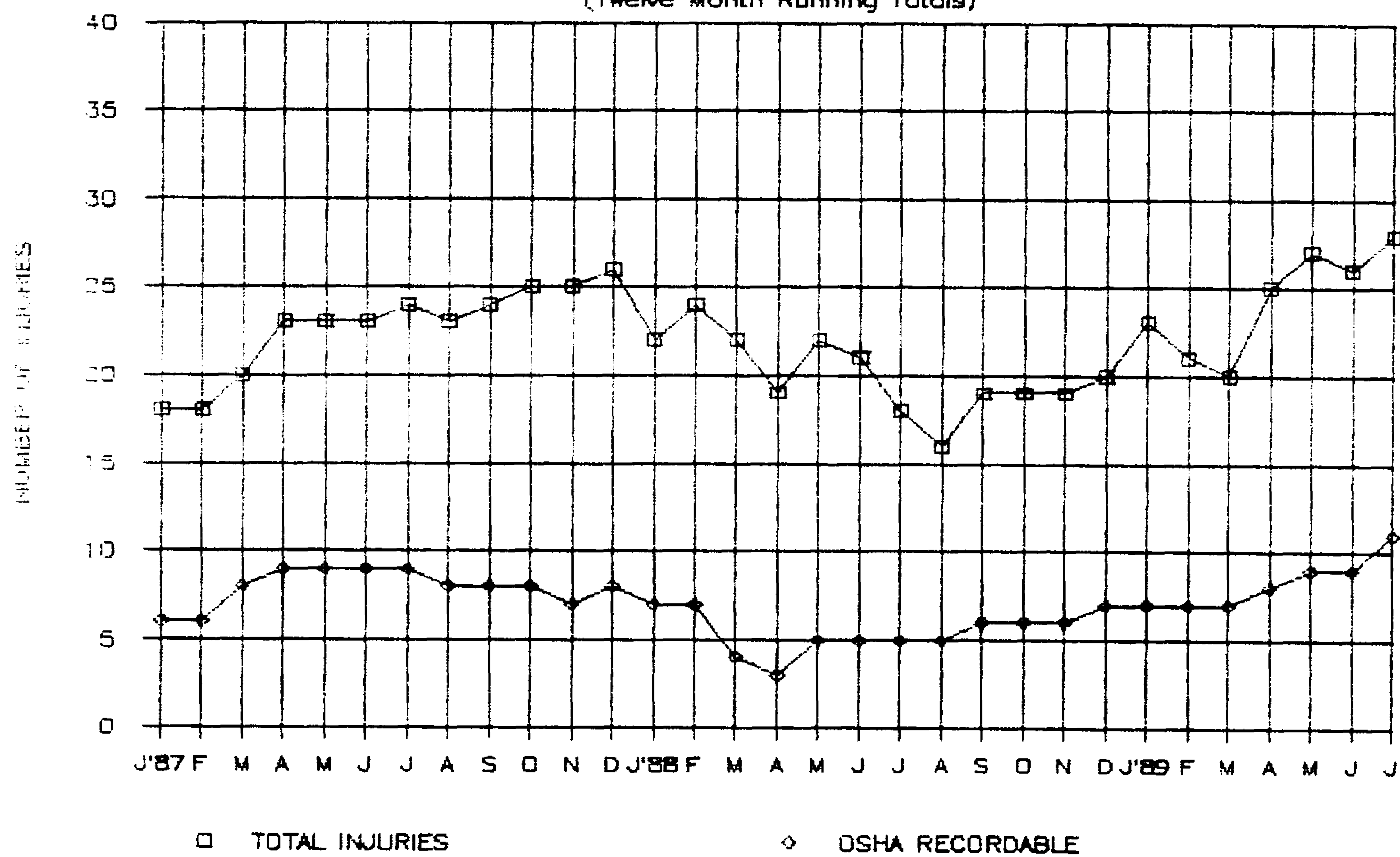
<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
7/06/89	38931 NAT	10 lbs.	Precision Electrical Products
7/10/89	18162 GRY 545	300 lbs.	National Extrusion
7/13/89	15072 NAT	250 lbs.	Aeroquip Corporation
7/24/89	34502 NAT	200 lbs.	Tandy
7/27/89	34431 NAT	100 lbs.	Automate
7/27/89	18162 NAT	1600 lbs.	Aeroquip Corporation
	18961 NAT	1500 lbs.	

DRYBLEND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
7/21/89	RP-91 WHT 110	1300 lbs.	Elixir Industries
7/24/89	90172D WHT 110	2600 lbs.	U-Brand
7/24/89	378-143 BL 170 (Purge)	1500 lbs.	Mid-American Ind. VAB.0001190431

ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)



ABERDEEN ENERGY CONSUMPTION

