

File Copy A

To: T. H. Huffman

From: D. C. Skokna
Date: November 17, 1989

Interoffice
Communication

Subject: ABERDEEN MONTHLY PROGRESS REPORT
OCTOBER, 1989

VISTA

Safety

There were two first aid and one recordable cases reported during the month. The recordable case involved a mechanic who received a second degree burn to his chin. As of October 31, the plant's employees have worked 3,771 days (4,989,563 manhours) since the last lost time injury.

Key Statistical Information

	<u>October</u>	<u>Y.T.D.</u>
PVC Production, MM Lbs.	32.9	32.9
Reactor Stream Factor, %	75.4	75.4
Resin Quality, % Prime	97.5	97.5
VCM Efficiency, Lbs./Lb.	0.9972	0.9972
Flexible Compound Production, MM Lbs.	6.6	6.6
Flexible Compound Quality, % Prime	97.9	97.9
Rigid Compound Production, MM Lbs.	3.5	3.5
Rigid Compound Quality, % Prime	98.6	98.6
Plasticizer Production, MM Lbs.	1.5	1.5
Plasticizer Quality, % Prime	90.6	90.6
Energy Use, (EUI, %)	< 3.9>	< 3.9>
Fixed Cost Variance, \$M	60.5	60.5
Variable Cost Efficiency Variance, \$M	74.8	74.8

Capacity Utilization Factors

Resin	0.87	0.87
Flexible Compound	0.84	0.84
Rigid Compound	0.56	0.56
Plasticizer	0.81	0.81

Waste Reduction Indices (%)

Offsite, Hazardous Wastes	91.4 ⁽¹⁾	108.1
Recycled, Hazardous Wastes	94.7 ⁽¹⁾	69.4
Offsite, Non-Hazardous Wastes	100.7 ⁽¹⁾	108.8
Vulnerable By-Products	90.0 ⁽¹⁾	79.2
Total Waste Water	104.3 ⁽¹⁾	122.1
Air and Water	78.6 ⁽¹⁾	85.9

(1) Three-month rolling average.

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Operations

The annual new module turnaround was completed during the month. Key work included vessel inspections, shutdown repairs, tie-in of the Plant Electrical Upgrade Project and installation of dryers #5 and #6 baghouses. The old module was down for three days to allow electrical tie-ins.

Costs

Variable costs were favorable due to good raw material efficiencies in the resin unit, a favorable product mix variance in the flexible compound unit, partially offset by above budget raw material consumption in the plasticizer unit.

Fixed costs were favorable due to lower than budget benefit charges, a favorable property insurance variance, partially offset by an unfavorable MM&C variance related to the new module turnaround.

OMP

1. Fifty-five percent of the plant's natural teams met during October.
2. AT&T (a flexible compound customer) audited the plant. We received an "adequate - with recommendations" rating. Their audit is based on the sixteen elements of the ASQC National Standard for Quality System Elements. Three levels of scoring are possible: Adequate, Adequate with Recommendations, and Inadequate. The lowest rating received in any element is the overall rating. We received "adequate" ratings in eight elements and "adequate - with recommendations" in eight elements. The changes necessary to upgrade the overall rating are not major. We plan to have implemented the recommendations by mid-1990.
3. Uniroyal (a resin customer) performed an audit of the plant. We received an overall rating of 78.7% (considered to be "acceptable"). Uniroyal complimented the plant on the consistency of the resin we sell them - they said that improvements made in 1989 have cut their scrap rate from 24% to 12%.
4. Exxon representatives visited the plant to discuss plasticizer quality and to tour the plasticizer unit.

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OMP - continued

5. The Lab-Vinyl Team made its presentation to management. This team reduced delays that had been occurring from the time a resin railcar was loaded until it was approved for shipment. These improvements will save over \$30,000 per year in railroad switching charges. No investment is needed.
6. The Vinyl Operations Superintendent's Natural Team implemented procedural changes that reduced the amount of off-grade resin produced in October by 750,000 pounds (the reduction is based on FY1989 average off-grade production rates). This will generate about \$15,000 in additional revenues (assuming off-grade sells for 2¢/lb. less than prime grade). No investment was necessary.
7. Nine employees from the Aberdeen Plant participated in "Excellence in Mississippi" in Jackson, MS. The seminar, sponsored by the Association for Quality Progress, featured presentations from Mississippi industries and academic institutions about quality efforts.

Environmental

1. All the new dryer baghouses are operational. Stack sampling shows particulate emissions being reduced from seven lbs./hour to 1.5 lbs./hour. This meets the design goal.
2. Stabilizer spill was accepted at Chem Waste Management's Lake Charles facility.



D. C. Skokna
Plant Superintendent

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

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

Injuries by Department

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

Injuries by Type

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

Non-Occupational Injuries

Lost Workday Cases	0	0	0
Days Lost	27	27	0

Safety Record

Last lost time injury - 7/5/79
Days since - 3771
Employee hours since - 4,989,563

On October 31, 1989, the employees of the Aberdeen plant completed 3771 days with no lost time injury.

The topic for plant safety meetings during the month was annual fire training.

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	79	98.7	1	1.3
Lead	15	100.0	0	0.0
Total Particulates	3	100.0	0	0.0

The single VCM overexposure was without benefit of respirator protection.

Monthly Injury Summary

<u>Injury Class</u>	<u>Department</u>	<u>Description</u>
FA	Maintenance	Contusion of third, right finger.
FA	Engineering	Bee sting of right thumb.
MT	Maintenance	Burn to chin.

The medical treatment case occurred during annual fire training when a maintenance employee received a small second degree burn to his chin.

QUALITY DEVELOPMENT - M. R. Kane

General

Nine plant employees participated in "Excellence in Mississippi" in Jackson, MS. The seminar, sponsored by the Association for Quality Progress, featured presentations from Mississippi industries and academic institutions about quality efforts.

Plant Manager

The Plant Manager's Natural Team worked on developing measures for teams being formed and finishing to emphasize and encourage teams. Other measures which will be developed include a measure of employee development.

Vinyl

The Vinyl Natural Team met during the month and developed a list of team measures from which the most critical will be selected and base line data will be collected on those. Waste minimization was discussed and areas of potential reduction were discussed.

Uniroyal Plastics visited the plant during the month and conducted a quality audit. The audit score was 78.7% which represents an "acceptable" rating.

The Vinyl Department Head participated in a meeting with Southwire Executive Management in Houston. The meeting included signing of the Vendor Excellence Program by Vista and Southwire.

Compound

AT&T audited the plant. We received an "adequate with recommendations" rating. The audit was based on sixteen of the elements of the ASQC National Standard for Quality Systems. There are three levels of scoring possible: Adequate, Adequate with Recommendations, and Inadequate. The lowest rating received in any element is the overall rating. We received "adequate" ratings in eight elements. The improvements required are not major and we plan to be able to be re-audited during 1990.

COST VARIANCES - D. C. Skokna

Variable Costs

<u>Product</u>	<u>October, 1989 Variance, \$M</u>		
	<u>Efficiency</u>	<u>Price</u>	<u>Total</u>
PVC	\$ 77.8	\$562.3	\$640.2
Flexible Compound	39.6	15.9	55.5
Rigid Compound	1.7	56.6	58.4
Plasticizer	< 44.4 >	< 20.7 >	< 65.1 >
	\$ 74.8	\$614.1	\$688.9

PVC - Raw material (primarily VCM and initiator) use was below budget.

Flexible Compound - The favorable variance was a result of a favorable "product mix" variance.

Rigid Compound - Operations were essentially at budget.

Plasticizer - Raw material use was above budgeted levels.

Price Variances

	<u>\$M</u>
- VCM	\$541.2
- Resin to Rigid Compound	50.5
- Resin to Flexible Compound	43.8
- Natural Gas	27.9
- Alfol [®] Alcohols	< 20.3 >
- 610P to Flexible Compound	< 44.1 >
- Other Price Variances	15.1
Total	\$614.1

Fixed Cost Variances

	<u>\$M</u>
- Payroll and Benefits	\$34.0
- MM&C	< 39.7 >
- Miscellaneous	47.5
- TI&D	15.0
- Clearances	3.7
Total	\$60.5

Payroll and Benefits - Employee benefits were \$23.7M favorable.

M. M. & C. - Costs were above budget due to new module turnaround charges.

Miscellaneous:

- Processing Supplies \$16.0M favorable
- Shipping Costs \$14.0M favorable (due to the plant shutdown)

T.I.&D. - Property insurance - \$11.2 favorable.

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

Operations/Mechanical Safety

Safety

The Operations Departments worked without injury in October. The Mechanical Department had one medical treatment case and two first aid cases. The medical treatment case involved a mechanic who received a small second degree burn to his chin during fire training. The first aid injuries involved:

- A mechanic who pinched a middle finger lifting a pump impeller from its case.
- An engineer who was stung by a wasp.

The monthly safety meetings were the annual fire fighting training.

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

General

1. Production was limited in both modules for seventy-two reactor hours to repair an electrical distribution problem. This was an unscheduled shutdown.
2. The annual New Module shutdown was completed this month. Routine vessel inspections, necessary repairs and capital tie-ins were performed during this shutdown. The Old Module was also shut down to complete necessary electrical tie-ins for the Plant Electrical Upgrade Project.
3. Dryers #5 and #6 baghouses were replaced during the month as part of the Rotary Dryer Baghouse Replacement Project. Dryer #4 is the last one to be replaced. Work is in progress to complete dryer #4.
4. During the month, there was an attempt to produce a batch of resin with 0.52 inherent viscosity (IV) resin. The actual IV came out to be 0.57. Though not on target, this batch provides important information for future ultra low resin inherent viscosity testing.
5. Produced this month in the Old Module was 5415.
6. The resin raw materials in the 744 account were valued at \$417.8M.

	<u>October</u>	<u>YTD</u>
- Production, MM Lbs.	32.9	32.9
- Daily Rate, M Lbs./C.D.	1061.0	1061.0
- Capacity Utilization Factor, %	87.0	87.0
- Total Reactor Charges	780.0	780.0
- Charges/C.D.	25.2	25.2
- Reactor Stream Factor, %	75.4	75.4
- Rotary Dryer Stream Factor (#4-#8), %	76.1	76.1
- Fluid Bed Dryer Stream Factor, %	76.1	76.1
- Resin Quality, % Prime	97.5	97.5

Reactor Downtime

	<u>Hours</u>
- Operational downtime (recovery scheduling conflicts, rinsing chem wash tanks, New Module rinse/charge water conflicts, no place to dump, changing filters, waiting on Q.C. data before charging, and inclement weather).	191

VINYL - ContinuedReactor Downtime - continued

	<u>Hours</u>
- Maintenance downtime (hydroblast/drill D700 and D745, power outage to change coils on new electrical switchgear, D600 reactor jacket welding, D745 agitator gearbox repairs, D744 rupture disc replacement, low steam pressure and miscellaneous instrument and valve repairs).	237.1
- New Module shutdown (including Old Module shutdown for electrical tie-ins).	1405.2

Dryer Downtime% of Total Downtime

- Reactor limited production.	31.2
- Operational downtime (centrifuge plugs, clean dryers, activator transfer problems, check dust collector socks, and flameouts).	5.9
- Maintenance downtime (repair activator valves, shear pins, burner maintenance #6, and various other activator and centrifuge repairs).	3.7
- Other (not needed due to New Module shutdown and dryers #5 and #6 baghouse replacement).	59.2

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

The following major work items were completed during the New Reactor unit shutdown:

- Reactors 741-745 were hydroblasted and dye-checked. There was a small crack found on the relief valve flange of reactor 744. The crack was directly below a bolt hole. The original bolt hole was drilled and tapped too deep which caused a weak spot at the bottom of the hole. The frequent removal and torquing of the relief valve eventually caused the crack. The crack was repaired and the bolt hole was re-drilled and tapped. There were no other problems found with the other reactors.
- Reactor 745 gearbox was removed during the shutdown for repairs. The bearing on the input pinion shaft failed and was replaced. The input pinion gear set was replaced along with the shaft for the bull gear.

VINYL - Continued

Key Maintenance Work - continued

- The condensers on reactors 700 and 745 were drilled as part of the contamination control program.
- The condenser base gasket on reactor 742 was replaced due to the deteriorating condition of the existing gasket. A Flexitallic spiral-wound gasket was installed in place of the stainless steel jacketed gasket.
- The 805 gearbox was replaced under reactor 741 with a new model 881 gearbox. The 804 gearbox will be sent out for inspection to determine if it can be repaired and used as a spare.
- The relief valves on the sphere were refurbished during the shutdown.
- 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.
- Reactor 744 rupture disc was changed out as part of the annual rupture disc program.
- The #4 dryer burner was changed due to it deteriorated condition. New Maxon gas valves were installed during this time.
- The condenser shells were acid-cleaned on reactors 741-745. The slurry dump lines, 747 blend tank and the sewer lines in the unit were also acid-cleaned.
- The west pump on #1 cooling tower sump was removed and sent out for repairs and reinstalled.
- There were three major valves changed out in the reactor area during the month.

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

Demand for flexible compounds continued steadily in October. We were able, however, to schedule longer production runs to regain inventory lost in September. Flexible compound inventory rose from 3947M pounds to 4490M pounds in October.

Orders were again light in October for rigid compound. The dry blend unit was down several days to control inventory. Some problems were experienced during the month with 80273G production. These quality control problems limited production for several days. The final cause of the problems has not yet been completely identified.

A test run to identify rigid pellet processing parameters was conducted on Line V. The test run used 90172D dry blend. Rigid pellets using slightly modified 90172D formulation will be produced on Line V in November.

A low-smoke, low-flame compound was produced on Line I. Samples of the compound were shipped to Prestolite for evaluation.

<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	29.5	2093	71	2093
Line III	29.5	3649	124	3649
Line V	20	<u>831</u>	42	<u>42</u>
Total		6573		6573
% Prime		97.9		97.9
Capacity Utilization Factor		.842		.842

DowntimeHoursLine I

- Product Changes	94
- Quality Problems & Control	13
- Miscellaneous Maintenance	8

Line III

- Product Changes	71
- Hydrotherm Maintenance	22
- Miscellaneous Maintenance	15
- Quality Problems & Control	8

Line V

- Product Changes	63
- W-P Maintenance	36
- Welex Problems & Maintenance	20
- Miscellaneous Maintenance	20

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	25	3472	139	3472
% Prime		98.6		98.6
Capacity Utilization Factor		.561		

Downtime

Hours

- Quality Problems & Control 116
- Product Changes 61
- Miscellaneous Maintenance 12

	<u>Operating Days</u>	<u>Month</u>	<u>Production (M Lbs.)</u>	
			<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Plasticizer	29	1681	58	1681
% Prime		90.6		90.6
Capacity Utilization Factor		.806		.806

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

- The #4 VCM compressor was changed out and rebuilt because of a leak.
- The east bio-disc pump was removed and rebuilt during the month.
- The south nitrogen blower was removed and rebuilt during the month.

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

- Number 3 boiler was shut down for inspection during the month. A buildup was noticed on the tubes and in the firebox during the inspection. Because of this, the tubes, firebox, steam and mud drums were hydroblasted. The water piping to the boiler was replaced in conjunction with a capital project, also. Several maintenance items were performed during this time. The relief valves were sent out for reconditioning and all of the boiler controls were inspected.
- Several maintenance items were taken care of in the boiler area during the steam outage for the electrical upgrade project. All instrumentation on #1 and #2 boilers was inspected. The three steam header valves were repaired, #2 boiler gas valve, the steam flow transmitter and block valves were replaced.

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

PROJECTS IN DEVELOPMENT - GENERAL

5415 Contamination Team

Testing for 5415 contamination sources is complete. The recommendations that have been completed have lowered the upper control limit for 5415 contamination below sixteen. The rest of the team's recommendations are still needed to reduce the number of statistically out-of-control points.

Dryer Dust Collectors

All the rotary dryer baghouses have been started up. Stack sampling shows particulate emissions have reduced to 1.5 lbs./hr. from 7 lbs./hr.

VCSM

VCSM (Vinyl Distributed Control System) engineers attended Taylor courses about ladder logic and Taylor control language.

European Technology Trip

Aberdeen process engineering participated in technology reviews with European PVC producers covering external slurry stripping and reactor clean wall technologies. EVC has a clean wall technology that has great potential. We are pursuing a licensing agreement which will include two test periods. Norsk Hydro and EVC both had external stripping technologies which looked promising. Operationally, the Norsk Hydro is preferred. However, Chisso Technology has yet to be reviewed.

5305 Graininess Work

During the technology trip, we also discussed the 5305 Klockner graininess problem with BASF. They feel it is a problem of foreign particles which is partially calcium. Some film imperfections, which may be graininess, were observed while calendaring 5305 on their lab calendar. This may be the graininess test we are looking for.

Two railcars were made for Klockner filtering charge water and VCM to ten microns absolute. It is hoped this will remove foreign contamination that may cause graininess. Samples have been sent to BASF and R&D for testing.

ENGINEERING - Continued**Reactor Steam Stripping Test**

The D744 modified slurry stripping procedure test was completed. The new procedure reduced slurry RVCM by 40%. Reactor condenser fouling is still a question mark because two early kill batches foamed during the test. Low molecular weight reactors will try the new procedures next month which should clarify this issue.

VCM Carbon Bed Adsorption

A preliminary design for carbon bed adsorption of VCM has been issued for estimation. Carbon bed adsorption of VCM stack emissions may be an alternative to external stripping to reduce plant VCM emissions.

ABERDEEN CHEMICAL PLANT
APPROVED CAPITAL PROJECTS

APR NUMBER	PROJECT DESCRIPTION	STATUS
A658	ALTERNATE NATURAL GAS PIPELINE	INSTALLATION IS IN PROGRESS WITH COMPLETION IN DECEMBER.
C738	PLASTICIZER REACTOR COMPRESSOR	INSTALLATION IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER.
D618	VINYL VALVE UPGRADE	INSTALLATION IS IN PROGRESS AND PLANNED FOR COMPLETION IN DECEMBER.
G668	PLASTICIZER REACTOR COOLING WATER RECYCLE	CONSTRUCTION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER.
C768	WATER TREATMENT ACID DILK REPLACEMENT	INSTALLATION IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER.
G848	IMPROVED POND AERATION	THE PROJECT IS COMPLETE AND WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER.
A519	PLANT ELECTRICAL UPGRADE	CONSTRUCTION IS 80% COMPLETE AND IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
A649	VINYL CONTROL SYSTEM MODERNIZATION	ENGINEERING IS IN PROGRESS. ENGINEERING WORK STATIONS ARE TO BE SHIPPED IN DECEMBER.
A909	INERTS REMOVAL MODIFICATIONS	DESIGN IS IN PROGRESS WITH COMPLETION SCHEDULED FOR FEBRUARY.
C919	NEW WATER WELL	CONSTRUCTION IS SCHEDULED TO BEGIN IN NOVEMBER WITH COMPLETION IN JANUARY.
B559	ALCOHOL TANK MODIFICATION	CONSTRUCTION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. IT WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER.
D619	PROPANE STORAGE AREA DELUXE SYSTEM	CONSTRUCTION IS SCHEDULED TO BEGIN IN LATE NOVEMBER WITH COMPLETION IN JANUARY.
D629	COMPOUND REHEATED TRANSFER SYSTEM	INSTALLATION IS SCHEDULED TO BE COMPLETED IN JANUARY.
D639	BOILER SAFETY REVISIONS	INSTALLATION IS SCHEDULED TO BE COMPLETED IN DECEMBER.
D749	LEAD HANDLING AND EXPOSURE REDUCTION	INSTALLATION IS SCHEDULED TO BEGIN IN DECEMBER WITH COMPLETION IN MAY.
D789	INERT GAS PURGING OF PA TANKS	INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR DECEMBER.
D849	COMPOUND LINE 3 SNI-DRILL LEAD HANDLING	ENGINEERING IS SCHEDULED TO BEGIN IN NOVEMBER WITH COMPLETION IN JANUARY.
D859	COMPOUND SILO BRIDGE BREAKING	ENGINEERING IS IN PROGRESS WITH COMPLETION PLANNED FOR JANUARY.
F579	COMPOUND BOXING HOPPER MAGNETS	CONSTRUCTION IS SCHEDULED TO BEGIN IN DECEMBER WITH COMPLETION IN JANUARY.
F609	PLASTICIZER FILTERS FOR LINES 1, 3, AND 5	CONSTRUCTION IS IN PROGRESS WITH COMPLETION IN DECEMBER.
F669	COMPOUND LINE 5 HEATED PLASTICIZER	ENGINEERING IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR MARCH.
F699	LOW MOLECULAR WEIGHT RESIN EXPANSION	INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR FEBRUARY.
F739	DRYER NO. 8 CONTAMINATION REDUCTION	ENGINEERING IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
F779	DRYER NO. 4 CONTAMINATION REDUCTION	ENGINEERING IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR JANUARY.
G569	DETENDED DIV. VALVE AND CHUTE REPLACEMENT	DESIGN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR JANUARY.
G659	NEW WATER BACHOWSKIS	INSTALLATION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. PROJECT COMPLETION IS PLANNED FOR JANUARY.
G719	COMPOUND SNIER REVISIONS	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR DECEMBER.
G759	WASTE OIL REDUCTION	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR DECEMBER.
G819	VCM SNIER GLASS REPLACEMENT	DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR DECEMBER.
G839	PLANT WATER RECYCLE	DESIGN IS SCHEDULED TO BEGIN IN NOVEMBER.
B509	MISCELLANEOUS CAPITAL PROJECTS < \$15K	ENGINEERING OR CONSTRUCTION IS IN PROGRESS ON 56 APPROVED PROJECTS.
B549	PVC REACTOR GLANDS REPLACEMENT	INSTALLATION IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER.
B589	PLANT AIR SYSTEM OPTIMIZATION	CONSTRUCTION IS IN PROGRESS AND PLANNED FOR COMPLETION IN NOVEMBER.
B679	PLASTICIZER REACTOR AGITATORS	THE AGITATORS HAVE BEEN RECEIVED. INSTALLATION IS PLANNED FOR COMPLETION IN FEBRUARY.
B729	TORQUE METER REPLACEMENT	INSTALLATION IS COMPLETE EXCEPT FOR PURCHASIST ITEMS. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN JANUARY.
B769	PLANT DIVIDER VALVE REPLACEMENT	LONG LEAD ITEMS ARE ON ORDER. PROJECT COMPLETION IS PLANNED FOR DECEMBER.
B809	CENTRIFUGAL REPLACEMENT	THE PROJECT IS COMPLETE AND WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER.
B829	PLANT SYSTEM COMPRESSOR - SPARE	THE COMPRESSOR IS SCHEDULED FOR DELIVERY FEBRUARY 1990.

ENGINEERING - R.I. POLK, S.C. WILLMAN, C.J. McDONALD

H869 COMPOUND LIME 1 FLOOR REPAIR
H879 ROOF OPERADE
1529 FURNITURE AND OFFICE EQUIPMENT

THE PROJECT IS COMPLETE AND WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER.
INSTALLATION IS 90% COMPLETE AND IN PROGRESS. COMPLETION IS PLANNED FOR DECEMBER.
THE PROJECT IS COMPLETE AND WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER.

ENVIRONMENTAL - F. G. Jeanson

Water

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

Results from the annual monitoring of our wastewater outfalls by the Mississippi DEQ were received this month. We received a 100% compliance rating. The testing was completed during the month of July.

SARA

A SARA team meeting was held this month. During this meeting, the four sub-teams decided on areas they would concentrate on. The four sub-teams are:

1. Employees and Families
2. Local Emergency Planning Committee
3. Community Relations
4. Schools and Education

The Aberdeen Plant video was updated. Pictures for the new brochure were taken. The brochure will be published in November.

A presentation for the employees at the Plant was put together to inform them of the 1988 SARA emissions and other environmental items. The department heads will give this presentation to their respective people during the month of November.

Waste

Waste shipments for the month of October included:

- One bulk load of lead/antimony bags to Chemical Waste Management, Emelle, Alabama.
- One bulk load of separator oil to Systech in Demopolis, Alabama.

Stabilizer spill was approved at CWM's Lake Charles, Louisiana facility. A shipment will be sent there in November.

The CMA waste survey was completed for wastes generated in 1988 and returned to the CMA.

I visited the Chemical Waste Management (CWM), Emelle, Alabama facility for their annual site tour and regulatory update meeting. CWM thinks they have a good chance to win the lawsuit they filed against Alabama for banning hazardous waste from certain states. They are still receiving non-hazardous waste from the banned states and do not foresee any problems with that.

ENVIRONMENTAL - Continued

Air

A meeting was held with the Mississippi DEQ to discuss permitting issues for the VCSM Project. This project would require a PSD permit if we remain a major stationary source. The State agreed that with our new baghouse project we could become a minor source. However, they specified that the permit limits in the air permit would have to be revised to be under the 100 tons/year limit.

We are currently evaluating the air permit to make the necessary revisions so that we can become a minor source. With minor source status, a PSD permit will not be required for the VCSM Project.

The Mississippi DEQ was here to do an inspection of air emission points this month after they received a complaint from a neighbor about particulates. I toured them around the plant and also showed them the new baghouses. I explained that we were in the process of starting up the new baghouses. Nothing else resulted from their visit.

Preliminary tests conducted on the new dryer baghouses indicate the baghouses are operating less than the guaranteed amount (2.4 lbs./hr.) but greater than the expected amount (0.6 lbs./hr.). Work is continuing to reduce the amount of particulate emissions so that the baghouses will operate at the expected amount.

The annual VCM valve and flange survey was completed this month. The New Module and sphere were surveyed. The total number of leaks found were twenty-one. These leaks were repaired and then rechecked.

Miscellaneous

I attended the 1989 Environmental Conference held in Jackson, Mississippi.

Waste Minimization

The waste minimization coordinators met in October to decide on a measurement system for the monthly reports. The measurement system includes six categories which are listed on the following table. A waste reduction index (WRI) is calculated for each of the categories and their main subheadings.

The percent waste reduction (% WRI) will be reported monthly on a three-month rolling average basis versus FY1988 on a per unit of production basis. The formula is:

$$100 \times 1 - \frac{\text{Most Recent 3 Months Lbs. of Waste}}{\text{Most Recent 3 Months Lbs. of Production}} - \frac{\text{FY1988 Total Lbs. of Waste}}{\text{FY1988 Total Lbs. of Production}}$$

We have also included a table on the type and pounds of each waste that are included under each category.

WASTE REDUCTION INDEX SHEET
October 1989

	<u>3 MONTH</u>	<u>%WRI 90 YTD</u>	<u>1989FY</u>
OVERALL	104.30%	122.00%	95.03%
I. Offsite, Hazardous Wastes	91.36%	108.10%	122.77%
a. Land Ban Wastes	90.90%	0.00%	63.20%
b. Hazardous Solids	103.44%	0.00%	117.50%
c. Non-Hazardous Treated as Hazardous	86.42%	153.79%	125.72%
II. Recycled Hazardous Wastes	94.70%	69.43%	103.51%
III. Offsite, Non-Hazardous Waste	100.73%	108.81%	98.27%
a. Recycled	101.30%	116.30%	98.48%
b. Non-Recycled	100.71%	108.65%	98.27%
IV. Vulnerable By-Products	90.02%	79.24%	116.90%
V. Total Waste Water	104.32%	122.07%	95.01%
VI. Air & Water	78.55%	85.90%	91.91%
a. SARA - Air	89.04%	86.63%	88.25%
b. SARA - Water	1126.67%	1318.32%	575.76%
c. Non-SARA - Air	89.95%	79.52%	98.30%
d. Non-SARA - Water	66.12%	90.97%	87.22%

WASTE REDUCTION INDEX SHEET
October 1989

		POUNDS			
		1988FY	1989FY	90 YTD	3 Month
I.	Offsite, Hazardous Wastes	259962	324789	20695	59594
a.	Land Ban Wastes	2412	1551	0	550
	1. Phthalic Anhydride	2412	1551	0	550
b.	Hazardous Solids	74821	89465	0	19420
	1. Stabilizer Spill	12742	22425	0	0
	2. Floor Sweep	62079	67040	0	19420
c.	Non-Hazardous Treated as Hazardous	182730	233773	20695	39624
	1. Plast. Filter Cake	61670	56573	0	0
	2. Lead Bags	11440	67880	13900	19460
	3. API Sludge	29620	29320	0	0
	4. Pit #1 Solids	80000	80000	6795	20164
II.	Recycled Hazardous Wastes	653226	688080	33397	155224
a.	Recycled	653226	688080	33397	155224
	1. Separator Oil	651700	686210	33180	154790
	2. Safety Kleen Solvent	1526	1870	217	434
III.	Offsite, Non-Hazardous Waste	6699074	6699373	536788	1693095
a.	Recycled	140601	140900	12041	35739
	1. Drums	49600	49600	4213	12502
	2. Pallets	39000	39000	3312	9830
	3. Aluminum Cans	0	300	100	300
	4. Scrap Metal	52000	52000	4416	13107
b.	Non-Recycled	6558473	6558473	524747	1657356
	1. Landfill	6558473	6558473	524747	1657356
IV.	Vulnerable By-Products	3597456	4279372	209932	812589
a.	PVC	3597456	4279372	209932	812589
	1. Culls	471409	533237	21520	70587
	2. Vacuum Vent Dust	329480	541016	41706	121146
	3. Sifter Overflow	801007	504106	9212	63270
	4. Pond Resin	1915560	2621013	130699	537422
	5. Pit #2 Resin	80000	80000	6795	20164
V.	Total Waste Water	4424987560	4278245861	397762756	1158280284
a.	Effluent	4424987560	4278245861	397762756	1158280284
	1. Pond 6	4424987560	4278245861	397762756	1158280284
VI.	Air & Water	646617	604755	40905	127437
a.	SARA - Air	73316	65843	4677	16379
	1. VCM	73316	65843	4677	16379

b.	SARA - Water	55	324	54	156
	1. VCM	22	21	2	6
	2. Di-n-octyl Phthalate	33	303	52	151
c.	Non-SARA - Air	264206	264300	15471	59633
	1. Particulates	263300	263300	15390	59393
	2. Sulfur Dioxide	906	1000	81	240
d.	Non-SARA - Water	309040	274288	20704	51269
	1. BOD	43689	46841	4458	10653
	2. TSS	68392	53152	3739	10218
	3. COD	195581	173096	12466	30237
	4. NH3	1378	1199	40	161

ENERGY CONSERVATION - D. A. MooreOctober, 1989Fiscal Y.T.D.I. Energy Conservation Data⁽¹⁾

A. Unadjusted EUI	-2.8%	-2.8%
B. Adjusted EUI	-3.9%	-3.9%
C. BTU/Lb. Product	2532.0	2532.0
D. Total Energy Consumption MMM BTU	112.9	112.9

(1) Plant electrical usage is an estimate because an additional meter was added during the Electrical Upgrade Project and was not read. This will be reconciled in the November energy numbers.

II. Plant Energy Conservation ProgramA. Maintenance

There were twenty-eight energy related items completed in October, 1989. Six of these items were steam leak repairs. The remaining twenty-two were steam trap repairs.

III. Boiler Operation

<u>Boiler</u>	<u>Combustion Efficiency %</u>	
	<u>Oct., 89</u>	<u>Fiscal Y.T.D.</u>
No. 1	83.63%	83.63%
No. 2	83.51%	83.51%
No. 3	83.01%	83.01%

HUMAN RESOURCE REPORT

OCTOBER, 1989

Personnel - J. E. Beall

Employment

Debbi Lemmons, New Hire

Promotions/Transfers

William Caldwell promoted from Lab Trainee to Lab "A" Technician.

Richard Pace promoted from Lab Trainee to Lab "A" Technician.

Nathanial Smith transferred from Lab Trainee to Compound Utility.

Janice Cullum promoted from Maintenance Clerk Typist to Employee Relations Assistant.

Joe Ann Williams transferred and promoted from Employee Relations Assistant - Aberdeen plant to Employee Relations Assistant - Baltimore plant.

RETIREMENTS

None

TERMINATIONS/RESIGNATIONS

None

TO/FROM LEAVE OF ABSENCE

None

DEPT	STR TIME HRS WRKD	OVERTIME HOURS		OVERTIME AS A % OF STR TIME	ABSENCE HRS LOST	ABSENCE AS A % OF STRAIGHT TIME				YEAR-TO- DATE	VACATION HOURS
		OVERTIME NONCONTROL	OVERTIME HOURS CONTROL			SICKNESS	PAID	OTHER	TOTAL		
YARD	1231.75	0.00	112.75	9.15	3.50	0.00	0.00	0.28	0.28	0.27	172.00
UTILITY	600.00	0.00	84.25	14.04	0.00	0.00	0.00	0.00	0.00	0.00	84.00
MAINTENANCE	5293.25	0.00	822.50	15.54	387.75	6.80	0.00	0.52	7.33	7.06	248.00
QC LAB	2680.75	0.00	92.50	3.45	139.25	3.13	0.00	2.06	5.19	5.57	136.00
JANITORS	470.50	0.00	28.25	6.00	1.50	0.00	0.00	0.32	0.32	0.25	8.00
WAREHOUSE	1083.50	0.00	56.25	5.19	0.50	0.00	0.00	0.78	0.78	0.62	32.00
STORES	318.75	0.00	3.00	0.94	1.25	0.00	0.00	0.39	0.39	0.31	0.00
DEVELOPMENT LAB	856.00	0.00	58.25	6.80	24.00	2.80	0.00	0.00	2.80	2.27	80.00
DRY BLEND	926.50	0.00	29.50	3.18	9.00	0.00	0.00	0.97	0.97	0.77	84.00
COMPOUND	6148.75	0.00	248.50	4.04	104.25	0.98	0.00	0.72	1.70	2.02	200.00
VINYL	5710.75	0.00	531.00	9.30	38.25	0.00	0.00	0.67	0.67	0.54	396.00
PLASTICIZER	769.00	0.00	14.25	1.85	19.00	0.00	0.00	2.47	2.47	5.93	44.00
GENERAL HELPERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL PLANT	26089.50	0.00	2081.00	7.98	736.25	2.02	0.00	0.80	2.82	2.92	1484.00

ABERDEEN, MISSISSIPPI

OCTOBER, 1989
MONTHLY PERSONNEL REPORT

Salaried Employees 79*
Hourly Employees 172
Total Employees 251

Minority Employees #, %
Salaried 6 8%
Hourly 66 38%
Total 72 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>15</u>	<u>8</u>	<u>53</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>16</u>	<u>5</u>	<u>31</u>	<u>7</u>	<u>7</u>	<u>0</u>	<u>0</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>	<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>	<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>	<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

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 1.2%

* Includes 2 Co-op Engineers.

ABERDEEN CHEMICAL PLANT
SHIPPING ANALYSIS
OCTOBER 1989

-SHIPMENTS BY PRODUCTS-	MONTH			YTD		
	PUBLIC	IPT/ITC	EXCHANGE	PUBLIC	IPT/ITC	EXCHANGE
RESIN-BULK	16,384,859	10,147,610	0	16,384,859	10,147,610	0
RESIN-PACKAGED	371,572	196,600	0	371,572	196,600	0
FLEXIBLE COMPOUND-BULK	1,272,310	1,474,200	0	1,272,310	1,474,200	0
FLEXIBLE COMPOUND-PACKAGED	3,212,113	113,872	0	3,212,113	113,872	0
RIGID COMPOUND-BULK	4,342,810	175,100	0	4,342,810	175,100	0
RIGID COMPOUND-PACKAGED	312,335	0	0	312,335	0	0
PLASTICIZER	130,260	508,600	0	130,260	508,600	0
TOTAL	26,026,259	12,615,982	0	26,026,259	12,615,982	0

-SHIPMENTS BY MODE-

BULK:	RAILCAR	CUSTOMER PICKUP	COMMON CARRIER	TOTAL
OCTOBER				
RESIN	136	30	69	235
FLEXIBLE COMPOUND	14	0	5	19
RIGID COMPOUND	23	5	10	38
PLASTICIZER	3	0	3	6
TOTAL OCTOBER	176	35	87	298

YTD				
RESIN	136	30	69	235
FLEXIBLE COMPOUND	14	0	5	19
RIGID COMPOUND	23	5	10	38
PLASTICIZER	3	0	3	6
TOTAL YTD	176	35	87	298

PACKAGED:	CUSTOMER PICKUP	COMMON CARRIER	TOFC	CONTAINER	AIR/UPS	TOTAL
OCTOBER						
RESIN	4	14	0	0	7	25
FLEXIBLE COMPOUND	17	78	0	0	1	96
RIGID COMPOUND	0	12	0	0	1	13
PLASTICIZER	0	0	0	0	1	1
TOTAL OCTOBER	21	104	0	0	10	135

YTD						
RESIN	4	14	0	0	7	25
FLEXIBLE COMPOUND	17	78	0	0	1	96
RIGID COMPOUND	0	12	0	0	1	13
PLASTICIZER	0	0	0	0	1	1
TOTAL YTD	21	104	0	0	10	135

LABORATORY - H. G. Coleman

A. **Safety** - There were no safety incidences in the Laboratory this month. Richard Williams coordinated the monthly safety meeting - a discussion on holiday safety, changing weather conditions, and safety at the workplace.

B. **Customer Contacts**

10/10-11 - The Lab participated in an audit by AT&T, represented by Cheryl Cincetti.

10/17 - Exxon visited the plant to observe our plasticizer operation; D. C. Cox participated.

10/19 - Uniroyal Plastics Company performed an audit of the Aberdeen Plant. Uniroyal representatives were Lynn Bakker and Fay Karpuleion.

10/24 - H. G. Coleman visited Dayton Extruded Plastics in Springboro, Ohio, to discuss resin specifications and rigid compound consistency.

Customer O.C. Problems Reports

10/9 - Southwire Company rejected one compartment of 5415 railcar 41147 for excessive contamination.

10/23 &
10/30 - Uniroyal Plastics rejected two bulk trucks of 5385 Type I resin for foreign contamination. Contamination was determined to be from material caked on the walls of commercial carriers prior to loading.

C. **Product Waivers**

<u>Customer</u>	<u>Product</u>	<u>Reason</u>	<u>No.</u>
American Mirrex	5265	Viscosity	1 R/C
Blane Polymers	5415	Static Flow	1 H/T
Eagle Plastics	80273G WHT 110	% on 40 Mesh	2 R/C
Eagle Plastics	80273G WHT 110	Short Stability	1 R/C
Essex	5415	Average Microns - Low	1 H/T
Essex	5415	% on Pan	2 R/C
Essex	5415	Static Flow	1 H/T
Rustique	RP-123 WHT 111	% on 40 Mesh	1 H/T
UTA	5415	Static Flow	1 R/C

LABORATORY - Continued**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 October, 1989.

	Reactor <u>Slurries</u>	<u>5265</u>	<u>Drier</u> <u>5305</u>
Number of Samples	786	26	61
Average RVCM, ppm	133	0.927	0.801

RVCM of Shipment Samples

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

<u>Product</u>	<u>Number of Samples</u>	<u>Average RVCM, ppm</u>
5265	26	0.335
5305	86	0.499
5385	36	0.371
5395	0	
5415	58	0.205
5465	0	0
Dry Blend	51	0.224
Debox	12	0.377
Pond	0	0

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

	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5415</u>
Bulk Density	1.67	1.56	2.17	1.03
Inherent Viscosity	1.29	0.50	0.73	0.57
(vs. 0.715 - 0.744)	----	0.22	----	----
L Color	3.19	3.08	6.33	6.50
A Color	3.00	3.67	----	----
B Color	2.67	4.67	2.67	6.33
% on Pan	1.25	1.67	2.20	1.57
(vs. 2%, max.)	----	----	----	0.14
% thru 140 Mesh	0.56	0.77	1.59	2.26
Drytime	----	----	2.33	2.67
Mets I.R.	----	----	----	2.38
(vs. 95% of control)	----	----	----	1.43
Hard Particles, (% > 10)	----	----	0.3	6.0
Average particle size, microns	135	141	166	168

LABORATORY - Continued

F. Flexible Compound Quality Summary

	<u>Adjustments</u>		<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>	<u>M Lbs.</u>	<u>(%)</u>
Hardness	54.0	(0.82)	1.5	(0.02)
Color/Clarity	----	----	38.6	(0.59)
Hard Particles	----	----	13.8	(0.21)
Dicing	----	----	18.4	(0.28)
Heat Stability	10.0	(0.15)	6.3	(0.10)
Cross Contamination	----	----	7.6	(0.12)
Streamers	----	----	<u>12.8</u>	<u>(0.19)</u>
Totals	64.0	(0.97)	99.0	(1.51)

G. Rigid Compound Quality Summary

	<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>
Torque Rheometry	29.9	(0.86)
Color	7.7	(0.22)
40 Mesh Retention	3.6	(0.10)
Mischarge	<u>7.7</u>	<u>(0.22)</u>
Total	48.8	(1.41)

H. Miscellaneous

1. Our new Brabender PL2000 torque rheometer was received and installed. Precision testing is being performed by D. S. Cox prior to commission.
2. The new Sintech tensile tester was installed and serviced by a factory representative. It is temporarily located in the Tech Service Lab while we review the operation of our constant temperature/constant humidity room.
3. H. G. Coleman participated in the annual Southwest Region Customer Interaction Program.
4. J. R. Williams and Gary Fritch attended the Excellence in Mississippi seminar on October 13.
5. H. G. Coleman attended a presentation by Pennwalt (Lucidol) on October 31. Their SPC program and charting were discussed.

SAMPLE SHIPMENTS

OCTOBER 1989

RESIN

Ship Date	Product	Amount	Customer
10/04/89	5415	400 lbs.	C ITOH & CO
10/09/89	5415	50 lbs.	ANDROMEDA INTERNATIONAL
10/12/89	Pond Resin	2 lbs.	Jim Beightol
10/12/89	5265	2 lbs.	Oatey Company
10/18/89	5415	50 lbs.	Wirekraft
10/23/89	5385	50 lbs.	Witco Corporation
10/23/89	Pond Resin	1249 lbs.	ANDROMEDA INTERNATIONAL
10/30/89	5385	100 lbs.	NISSHO IWAI CORP.
10/30/89	5385	100 lbs.	Argus Chemical
10/31/89	5265	100 lbs.	Morton International

COMPOUND

Ship Date	Product	Amount	Customer
10/02/89	2153 NAT	400 lbs.	TELMAG S.A. DE C.V.
	35851 NAT	400 lbs.	
	35852 NAT	400 lbs.	
10/04/89	2153 NAT	2745 lbs.	Encore Wire Corporation
	38601 NAT	3000 lbs.	
10/04/89	151-176 CB 50	300 lbs.	Deckerville Plastics
10/06/89	48562 BLK	500 lbs.	TREMPEX AB
10/06/89	35852 NAT	25 lbs.	Vista - Austin
10/13/89	419-66-1 NAT	200 lbs.	Superior Optics
10/25/89	38201 GRY 573	500 lbs.	P. W. Pipe
	38901 GRY 573	500 lbs.	
10/26/89	16841 NAT (BC)	5 lbs.	Conex of Georgia
	17461 NAT (BC)	5 lbs.	
	17561 NAT (BC)	5 lbs.	
10/26/89	416-74-1 NAT	500 lbs.	Prestolite Wire Corp.

DRYBLEND

Ship Date	Product	Amount	Customer
10/10/89	80273G WHT 110	100 lbs.	AHI PLASTICS LTD.

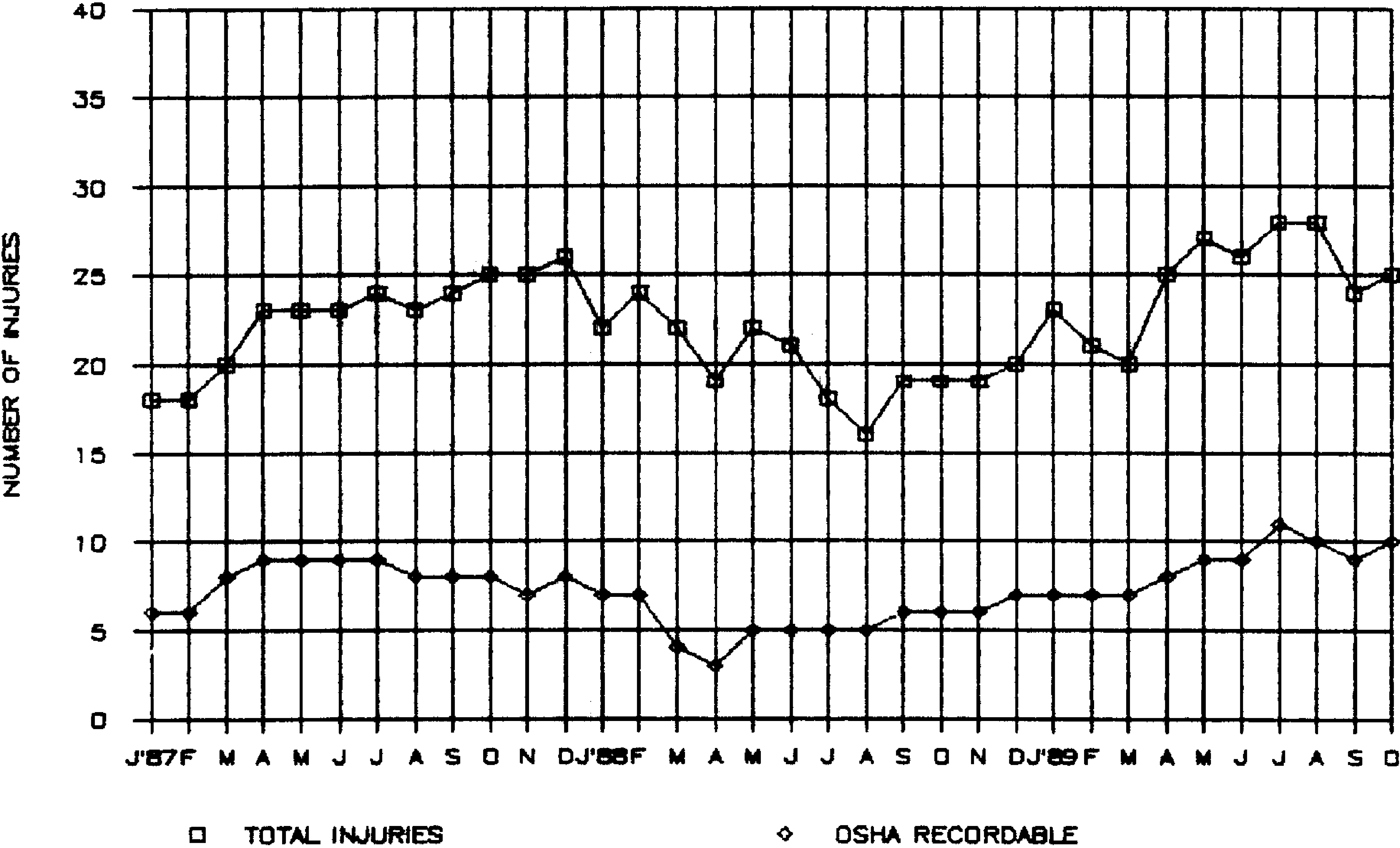
PLASTICIZER

Ship Date	Product	Amount	Customer
10/18/89	610P	55 gal.	CHISSO PETROCHEMICAL

VAB.0001190334

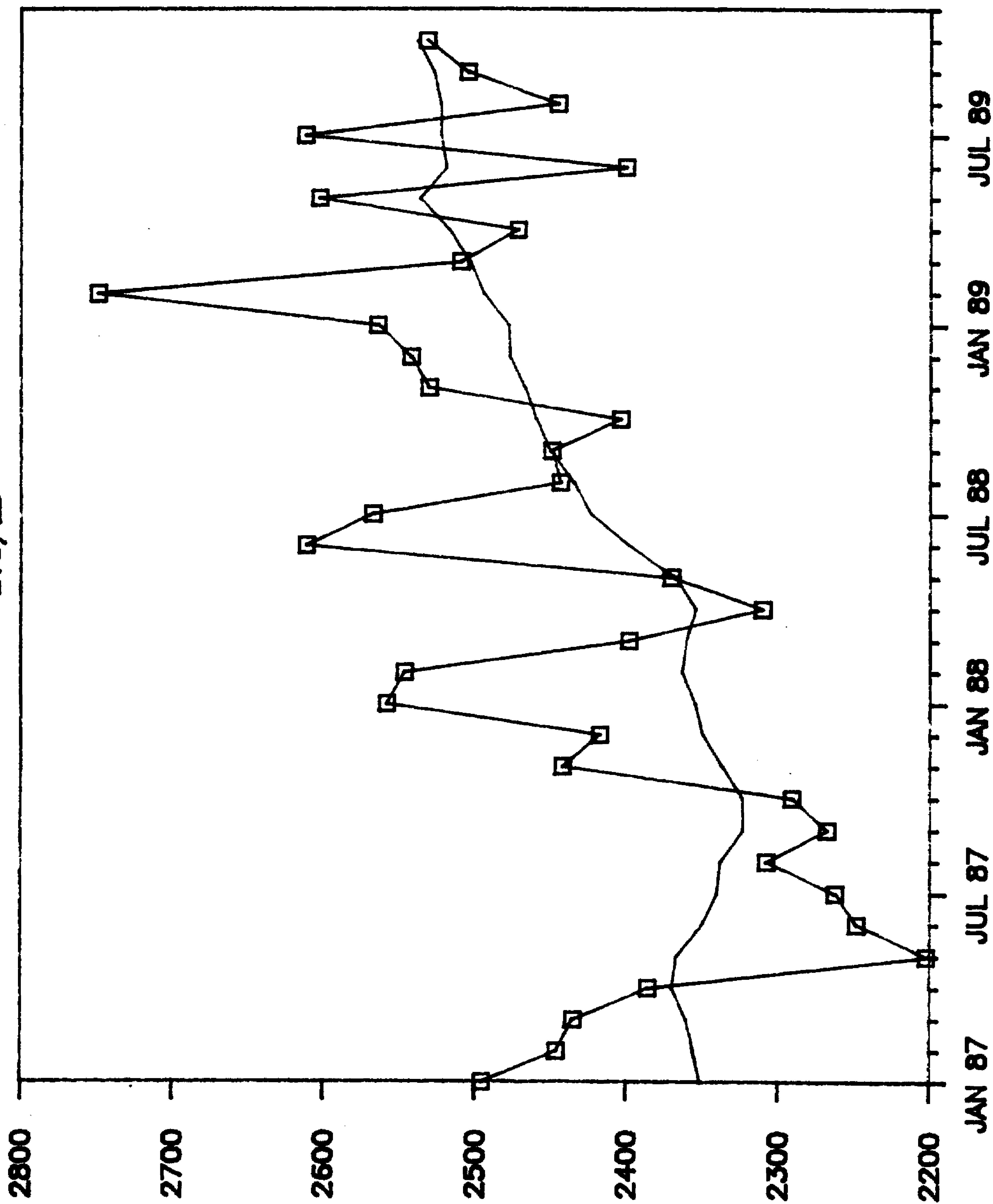
ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)



ABERDEEN ENERGY CONSUMPTION

BTU/LB



□ MONTHLY

— 12 MONTH AVERAGE