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A

To: T. H. Huffman

From: D. C. Skokna
Date: July 27, 1990

Subject: ABERDEEN MONTHLY PROGRESS REPORT
JUNE, 1990

Interoffice
Communication

VISTA

Safety

There were no reported injuries in June. At month's end Aberdeen plant employees had worked 4013 days (5,340,396 manhours) since the last lost time injury.

<u>FY 1990 Key Statistical Information</u>	<u>June</u>	<u>Y.T.D.</u>
PVC Production, MM Lbs.	37.4	336.5
Reactor Stream Factor, %	92.0	88.4
Resin Quality, % Prime	98.9	97.3
VCM Efficiency, Lbs./Lb.	0.92642	1.0013
Flexible Compound Production, MM Lbs.	5.8	54.4
Flexible Compound Quality, % Prime	98.5	98.3
Rigid Compound Production, MM Lbs.	4.6	44.3
Rigid Compound Quality, % Prime	99.8	99.6
Plasticizer Production, MM Lbs.	1.4	13.6
Plasticizer Quality, % Prime	85.6	87.1
Energy Use, (EUI, %)	< 3.2>	< 7.7>
Fixed Cost Variance, \$M	< 12.0>	215.3
Variable Cost Efficiency Variance, \$M	40.7	594.0

Operations

Six railcars of low calcium 5305 were produced for Klockner. Installation of the permanent clean wall system began and will complete in August.

Some 56 hours of Line I time were used for Plenex Polymers development. Rates in the rigid compound unit were adversely affected by screener problems (136 hours of downtime).

T. H. Huffman

7/27/90

Aberdeen Monthly Progress Report - June, 1990

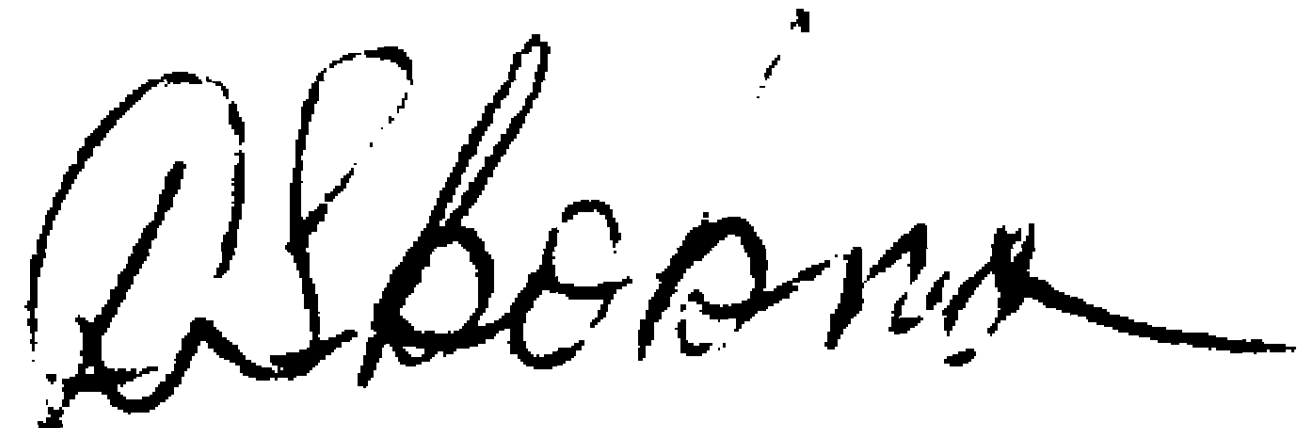
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Costs

Variable costs were favorable in the resin and compound units. Good efficiencies and low offgrade rates in these units and favorable product mixes caused the good results. Offsetting these variances was an unfavorable (high use of raw materials) variance in the plasticizer unit. A process change made earlier may be the cause of the inefficiency.

OMP

1. 100% of the plant's natural teams met during June.
2. Overall, natural team scores for the 3rd quarter are up 46% from the previous quarter; an average score of 7.3 points.
3. The plant's estimated Q-Scorecard results as of June 1 are 10.3.
4. The Vinyl "B" Shift Natural Team made its management presentation. They recommended improved blend tank sparger design that benefits the environment, improves safety and quality, and reduces energy consumption.
5. AT&T (a compound customer) presented us their 5 Star Rating (the highest) as a result of our semi-annual vendor rating.



D. C. Skokna
Plant Superintendent

rah

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MRK, JEL, DAM, RBN, JEN, JDO, REP, BLT

SAFETY - B. L. Trego

	<u>June</u>	<u>Fiscal</u> <u>Y.T.D. 1990</u>	<u>Fiscal</u> <u>Y.T.D. 1989</u>
First Aid	0	13	12
OSHA Recordable	<u>0</u>	<u>4</u>	<u>6</u>
Total Injuries	0	17	18
Number of Restricted Workday Cases	0	3	2
Number of Lost Workday Cases	0	0	0

Injuries by Department

Vinyl Operations	0	0	2
Compound Operations	0	5	4
Maintenance	0	10	10
Laboratory	0	1	1
Receiving/Warehouse	0	0	0
Office	<u>0</u>	<u>1</u>	<u>1</u>
Totals	0	17	18

Injuries by Type

Cuts and Abrasions	0	6	3
Eye Injuries	0	1	0
Burns	0	3	6
Bruises	0	2	4
Strains/Sprains	0	1	3
Stings	0	2	0
Other	<u>0</u>	<u>2</u>	<u>2</u>
Totals	0	17	18

Non-Occupational Injuries

Lost Workday Cases	0	6	2
Days Lost	14	133	42

Safety Record

Last lost time injury - 7/5/79
Days since - 4013
Employee hours since - 5,340,396

On June 30, 1990, the employees of the Aberdeen plant completed 4013 days with no lost time injury.

The major topics for June safety meetings were CPR and Respirator Training.

SAFETY - Continued

David C. Sheffield of International Loss Control Institute, conducted a plant-wide safety audit during the week of June 25, 1990. A report of the findings is expected from ILCI during July.

Routine dosimetry results for the month were:

<u>Chemical</u>	<u>< PEL</u>		<u>> PEL</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
VCM	77	98.72	1	1.28
Lead	18	94.74	1	5.26
Total Particulates	7	100.0	0	0.0

Both overexposures were benefit of respiratory protection.

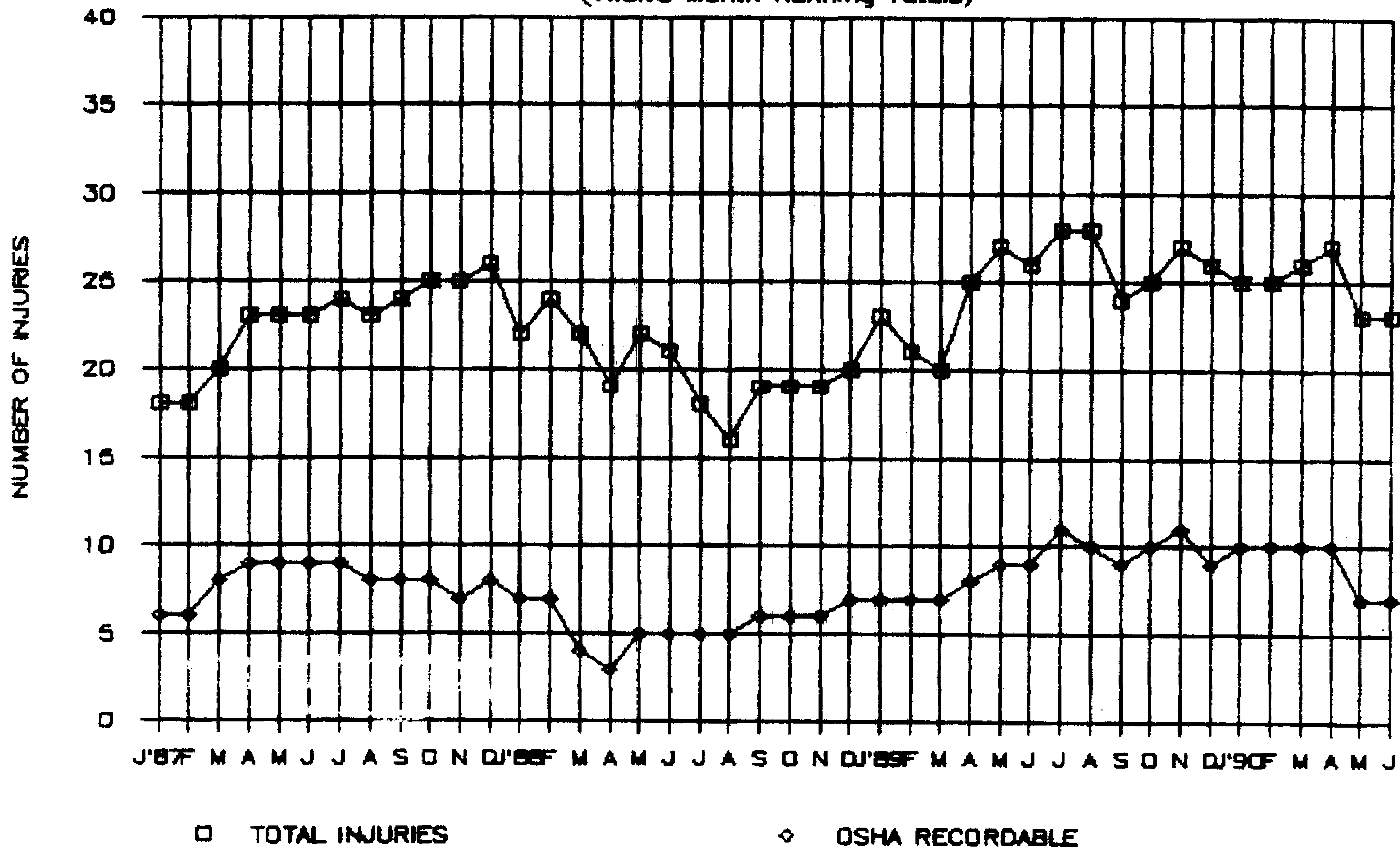
Monthly Injury Summary

<u>Injury Class</u>	<u>Department</u>	<u>Description</u>
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No injuries reported during June.

ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)



QUALITY MANAGEMENT PROCESS - T. J. Arbeiter

Q3FY90 Natural Team scores are in! The Aberdeen Plant team activity resulted in an average score of 7.3 points, up 46% from the previous quarter. Our Natural Teams and facilitators deserve great credit for the accomplishment. These "points" represent a lot of good work done by our teams.

The Vinyl "B" Shift Natural Team made a presentation to management on June 20th. The team recommended changes to sparger design aimed at benefiting the environment, improving safety and the quality of our products, and reducing energy consumption.

The Aberdeen Q-Scorecard score as of June 1st is 10.3. Our progress by line item is as follows:

<u>Item</u>	<u>Score</u>
1990 Card Submission	10
1991 Card Submission	10*
Average Natural Team Score	10
Safety	12
Cost Control	12
Quality	10*
Waste Minimization	13
Linkage	4

* Assumed

COST VARIANCES - D. C. Skokna

Variable Costs

<u>Product</u>	<u>June, 1990 Variance. \$M</u>		
	<u>Efficiency</u>	<u>Price</u>	<u>Total</u>
PVC	\$74.0	(\$65.5)	\$ 8.5
Flexible Compound	38.9	(21.4)	17.5
Rigid Compound	11.3	(1.6)	9.7
Plasticizer	(83.5)	44.4	(39.1)
	\$ 40.7	(\$ 44.1)	\$ (3.4)

PVC - \$74.0M favorable. VCM consumption was below budget, and product mix was favorable. Offgrade production was 70% below budgeted levels.

Flexible Compound - \$38.9M favorable. Raw material use was slightly above budget (\$20.1M), product mix was \$49.3M favorable, and variance due to offgrade was \$10.6M favorable. Millscrap production was 62% below budget.

Rigid Compound - \$11.3M favorable. Operation was essentially at budget.

Plasticizer - \$83.5M unfavorable. Raw material use was significantly above budget. Investigation indicates that a switch to soda ash neutralization (done to reduce the amount of BOD going to the wastewater system) may be the cause of this month's and recent month's inefficiencies. To evaluate further, use of caustic has been resumed.

Price Variances - \$44.1M unfavorable

	<u>\$M</u>
- Alfol 610 ^R Alcohols	\$ 31.9
- 610P to Flexible Compound	28.9
- VCM	(68.9)
- All Other Prices Variances	(36.0)
Total	(\$ 44.1)

Fixed Cost Variances - \$12.0M unfavorable

	<u>\$M</u>
- Payroll and Benefits	\$ 24.2
- MM&C	42.5
- Miscellaneous	62.5
- TI&D	(137.2)
- Clearances	(4.0)
Total	(\$ 12.0)

COST VARIANCES - Continued

Payroll and Benefits - Payroll was essentially at budget while benefits clearances were \$179M favorable.

M. M. & C. - Activity was below budgeted levels.

Miscellaneous - Most items in this group were favorable; the most favorable item was "packaging supplies" - \$26.2M favorable.

T.I. & D. - An unexpected city tax clearance caused this category to be significantly unfavorable. We are trying to determine why this happened.

VINYL - J. D. Olson, J. M. Vinoski

Safety

The Vinyl Department had no first aid or OSHA recordable injuries during the month of June.

The monthly safety meeting topic was "Plant Emergency Action Guidelines".

General

1. Six railcars of decalcified 5305 resin were produced and shipped to Klockner in June. Resin calcium levels were reduced to about 10% of normal. Additional June production of decalcified resin will be held for Klockner's July order of six railcars.
2. Work began in June of the permanent BUS-80 system. Installation will be completed by mid-August.
3. The resin raw materials in the 744 account were valued at \$334.6M.

	<u>June</u>	<u>YTD</u>
- Production, MM LBS.	37.4	336.5
- Daily Rate, M Lbs./C.D.	1246.7	1232.6
- Capacity Utilization Factor, %	102.3	101.1
- Total Reactor Charges	870.0	7898.0
- Charges/C.D.	24.0	28.9
- Reactor Stream Factor, %	92.0	88.4
- Rotary Dryer Stream Factor (#4-#8), %	89.2	80.5
- Fluid Bed Dryer Stream Factor, %	97.6	92.3
- Resin Quality, % Prime	98.9	97.3

Reactor Downtime

	<u>Hours</u>
- Operational downtime (recovery scheduling conflicts, New Module rinse/charge water conflicts, waiting for Q.C. data before charging, O-ring leaks, no place to dump, rinsing chem wash tanks power outage).	405.5
- Maintenance downtime (sewer valve replacement on 741, condenser drilling on 500, condenser jacket acid cleaning on 300 and 400, hydro-blasting and condenser drilling on 745).	170.5

VINYL - Continued

<u>Dryer Downtime</u>	<u>% of Total Downtime</u>
- Reactor limited production.	41.2
- Operational downtime (centrifuge plugs, dryer cleaning, and flameouts).	22.9
- Maintenance downtime (#4 resin hopper repairs, activator, baghouse, centrifuge, and exhauster maintenance, screw conveyor repairs).	35.9

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

- Number "6A" cooling tower east cell was shutdown during the month for repairs to its drive shaft and three of its blades. The fan shaft broke causing damage to three of the fan blades.
- The north recovery condenser and both sub coolers in the Old Reactor Unit were shutdown during the month for cleaning. The tube sides were drilled and the shells were acid cleaned on each.
- Reactor 600 was shutdown for relief valve changes during the month. The new relief valves were installed as part of the Low Molecular Weight Resin project.
- The "A" recovery compressor was shutdown during the month for repairs. The bearings and seals were replaced.
- Reactor 745 was shutdown during the month for condenser drilling and hydroblasting as part of the contamination control program.
- The Number 7 dust collector was shutdown during the month to replace the screw feeder on the dryer discharge. The screw shaft had broken on the screw feeder.
- Reactor 500 was shutdown during the month for condenser drilling because of cooling control problems.
- The motor on the #4 dryer exhauster was replaced during the month because of bad bearings and windings.
- There was one major valve changed out in the Reactor area during the month.

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

Safety

The compound department worked without injury in June. The topic of the monthly safety meetings was respirator training.

General

Continued formulation testing for PLENEX polymers consumed 56 hours on Line I. UL testing on different jacket/insulation combinations and constructions continues. Line V operated 12 days in June. Line V was down for 34 hours for a pelletizer clutch repair.

Rigid compound rates were adversely affected by problems with the Gump screeners in June. Maintenance required on the screeners as well as rescreening several railcars of material caused 136 hours of downtime in June.

Plasticizer rates were also reduced by reprocessing "cloudy" plasticizer. It is suspected that the "cloudiness" is caused by monoester and/or filtering agent. Several tests including additional filtration, water washing, and return to caustic neutralization are underway to solve the problem.

<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	30	1932	64	17869
Line III	30	3489	116	31137
Line V	12	<u>418</u>	<u>35</u>	<u>5437</u>
Total		5839	216	54443
% Prime		98.5		98.3
Capacity Utilization Factor		.735		.774

Downtime

Hours

Line I

- Product Changes	92
- PLENEX Polymer Testing	56
- Miscellaneous Maintenance	30
- Quality Problems & Control	4

Line III

- Product Changes	73
- Miscellaneous Maintenance	19
- Quality Problems & Control	15
- Dicer Problems & Maintenance	9

Line V

- Werner & Pfleiderer Maintenance	34
- Quality Problems & Control	33
- Product Changes	11
- Miscellaneous Maintenance	11

COMPOUND - Continued

	<u>Operating Days</u>	<u>Month</u>	<u>Production (M Lbs.) Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Rigid Compound	30.5	5412	177	39493
% Prime		99.8		99.6
Capacity Utilization Factor		.909		.827

Downtime

Hours

- Screener Maintenance & Product Rescreening	136
- Product Changes	64
- Miscellaneous Maintenance	73
- Quality Problems & Control	42
- Welex Maintenance	22

	<u>Operating Days</u>	<u>Month</u>	<u>Production (M Lbs.) Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Plasticizer	29.5	1434	49	13600
% Prime		85.6		87.1
Capacity Utilization Factor		.652		.708

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

- The vacuum jets on Plasticizer Reactor R-1 were removed for cleaning during the month due to an excessive calcium carbonate build up.
- The #7 air compressor was shutdown during the month for repairs. The valves and wipes were replaced due to wear.
- The #1 welex was shutdown during the month for repairs because the motor was kicking out on high amps. An IRD analysis was run on the motor and the welex bearings and it was determined that the jack shaft had a bad bearing that was causing the motor to pull high amps. The jack shaft and motor were replaced and the welex was put back in service.
- The Line I "A" blender was shutdown during the month for repairs because of a failing bearing in its gearbox. The gearbox was replaced with a spare and the blender put back in service.
- Several repairs were made to the VCM unloading compressors during the month. Numbers 1, 2, 3, 4, and 5 compressors were shutdown for repairs. Numbers 1, 2, 4, and 5 were shutdown and rebuilt because of blown gaskets. Number 3 compressor has a broken crank case and shaft. It was sent back to the factory for repairs.

ENGINEERING - R. E. Polk, S. C. Hillman, M. R. Kane

PROJECTS IN DEVELOPMENT - GENERAL

5305 Decalcified Resin

Production of decalcified 5305 resin continued using the temporary system in the New Module. Enough resin was produced in June to satisfy Klockner's requirements for the month of July.

Evaluation of the technology options for removal of calcium was completed. Ion exchange has been chosen over membrane separation because of the relative economics. A Class "A" design will be issued by the beginning of August.

Batch Water Stripper Performance

Improvement of the batch water stripper performance has occurred during the last two months. Most of the improvement is due to monitoring the system. Recommendations to further improve the stripper reliability include standardizing the operating procedure and some minor maintenance and capital modifications.

TC Compliance Project

The AFE request for the TC Compliance Project was submitted to Houston for approval. This project provides the implementation of EVC Cleanwall Technology and modifications to insure containment of water discharged from the Batch Watch Strippers.

A Hazard and Operability Study (HAZOPS) has been completed on this project. A consultant from Stone and Webster Engineering led a team of operations, maintenance, and engineering personnel through the review of P&I diagrams for the project. Representatives from PED and the Oklahoma City Plant also participated to learn HAZOPS techniques. PED is preparing the HAZOPS report from the study.

Production Model Building

Production Model Building began last month. The production models will be used as a part of OASIS to provide more accurate product cost accounting. The production models will include not only the current IPA items (utilities and raw materials) but also the activities which were recommended by Price-Waterhouse in their activity-based cost accounting evaluation.

ENGINEERING - Continued

Compound Sample Line

Economics were identified for the justification of a method to produce compound samples at Aberdeen. The cost of having samples produced at Premiere and Blane and the cost of the excess material when samples are produced at Aberdeen justifies further work. A design basis is being identified with a Class "A" design expected by September.

Boiler Feedwater Tank Replacement

The boiler feedwater tank has been condemned. This project will use an existing tank to replace the condemned tank. The tank will be lined with placite and located next to the existing boiler feedwater tank.

ENVIRONMENTAL - F. G. Jeanson

Water

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

Results were received from the State on our NPDES inspection. We were in full compliance.

Waste

Waste shipments for the month included:

- One bulk load of lead bags was shipped to CWM in Emelle, Alabama.
- Two bulk loads of stormwater solids were shipped to CWM in Emelle, Alabama.
- Thirteen drums of stabilizer spill were shipped to TES in LaPorte, Texas.

The Louisiana House and Senate have both passed a bill that would increase taxes for hazardous wastes disposed of in their state and would ban Mississippi from disposing of hazardous waste in Louisiana starting January 1, 1991. This bill is very similar to the one Alabama passed.

Superfund

A draft order was received from the State this month to do a remedial investigation of the superfund sites. Comments were gathered from legal, Joe Ledvina and Conoco. These comments were communicated to the State in a meeting held in Jackson.

Our comments were incorporated into the order and the State reissued the draft order for our review. We gave our final comments to the State. The final order is expected the first part of July.

DuPont Environmental Remediation Services (DERS) was in the plant this month to do a geophysical survey of the superfund sites.

Two other contractors contacted the plant about pond 2 resin removal this month. We are considering these options.

Air

The modeling study was reviewed by the State. The risk calculated from the fence line concentrations determined in the modeling study was greater than the State's internal guidelines. A meeting was held with the State to discuss the results of the modeling study and determine what action needed to be done in order for us to get a construction permit for the VCSM Project.

ENVIRONMENTAL - Continued

Air - Continued

We presented an option to reduce total emissions even though we will increase production by combining two projects. The VCSM Project and the Steam Stripping Optimization Project will be done in parallel; thus producing a net reduction in emissions. The State agreed with this option and wrote a draft construction permit. This permit was reviewed and sent back to the State. The State Permit Board will review this permit in the first part of July.

A construction permit should be granted the first part of July for the VCSM Project. However, our current operating air permit expires in March, 1991. The State plans to address the high risk associated with our fenceline concentrations at this time.

The NESHAP's quarterly report was completed and issued to the State.

SARA

The 1989 313 emissions were completed and issued to the EPA and the State. Ten chemicals were reported this year. A summary of the emissions is attached.

Miscellaneous

I attended waste minimization conference held by the Mississippi Technical Assurance Program.

The dust collectors sold to Louisiana Chemical Equipment Company were tested for asbestos. Twenty samples were taken and no asbestos was found.

I attended the DOT training held in Houston by the Corporate Environmental Department.

I participated in an environmental audit of the Oklahoma City Plant this month.

1989 SECTION 313 EMISSIONS

	FUG.	AIR STACK	WATER	LAND	OFFSITE	SECOND OFFSITE	TOTAL OFFSITE
ANTIMONY	0	0	0	0	1386(1) 2(2) 1(7)	0	1389 *
BARIUM	0	0	0	0	24(1) 335(4) 2(2)	0	361 *
BISPHENOL A	0	0	0	0	0	0	0
Di-N-Octyl Phthalate	0	0	335	0	5232(3) 732(7)	0	5964 *
HYDROCHLORIC ACID	0	296	0	0	0	0	0
LEAD	0	7	0	0	5233(1) 26(2) 8(7)		5267 *
METHANOL	1-499	1-499	0	0	0	0	0
PHTHALIC ANHYDRIDE	0	0	0	0	6072(5)	0	6072
SULFURIC ACID	0	0	0	0	20970(8)	0	20970
VCM(6)	3016	73196*	6	0	0	0	0

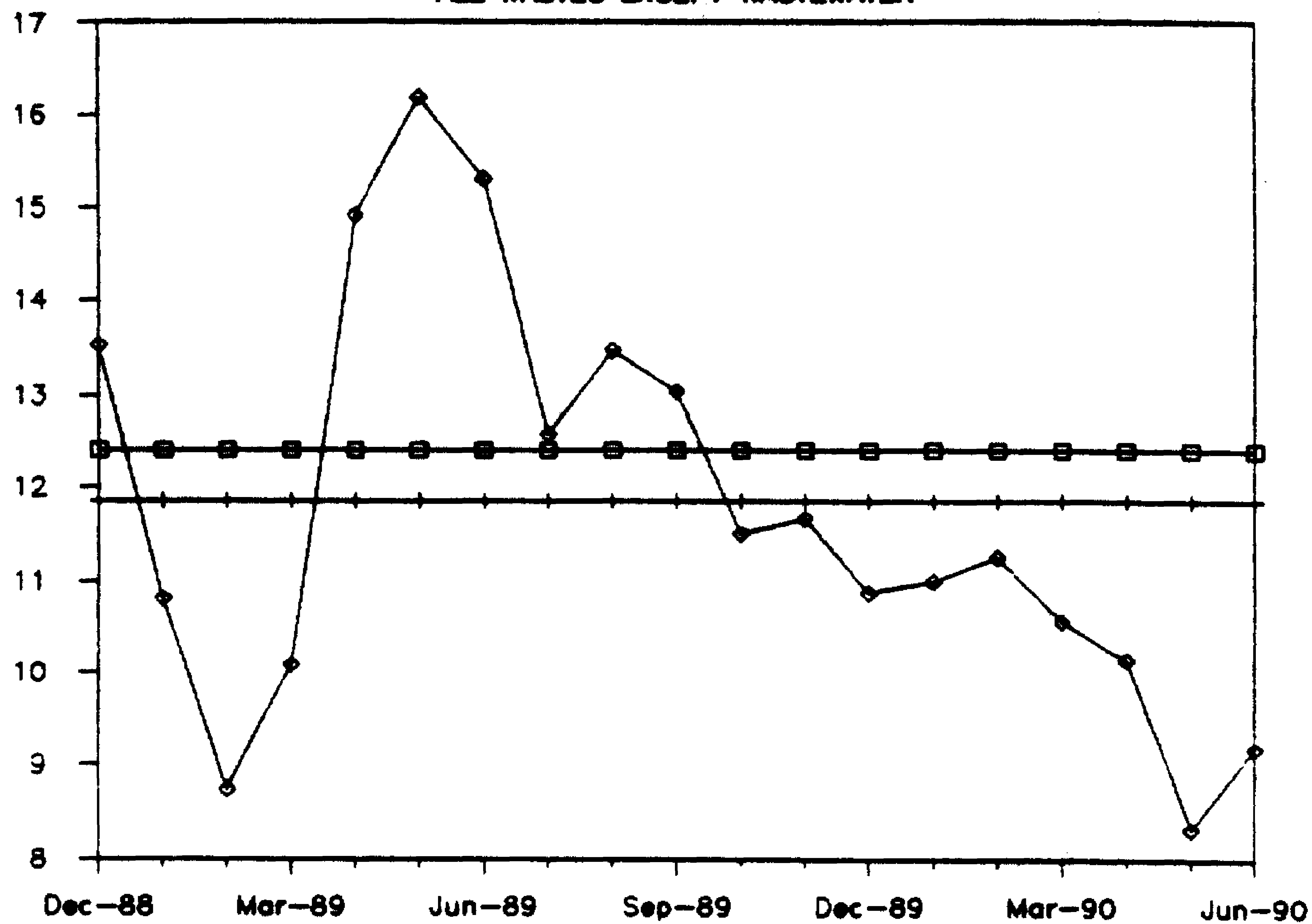
- (1) Empty Bags (Sent to Chem. Waste Management, Emelle, AL)
- (2) Floor Sweep (Sent to Chem. Waste Management, Emelle, AL)
- (3) Filter Cake (Sent to Chem. Waste Management, Emelle, AL)
- (4) Stabilizer Spill (Sent to Chem. Waste Management, Emelle, AL)
- (5) PA Spill (Sent to Chem. Waste Management, Emelle, AL)
- (6) Fugitive emissions were calculated using correlation factors developed from a bagging study done at this plant)
- (7) API Sludge (Sent to Chem Waste Management, Emelle, AL)
- (8) Sulfuric acid contaminated dirt from Acid Dike Replacement Project (Sent to Chem. Waste Management, Emelle, AL)

* Represents a reduction from 1988 emissions reported.

WASTE PRODUCTION VS GOAL -- 89 & 90

ALL WASTES EXCEPT WASTEWATER

LBS WASTE/M LB PRODUCTION

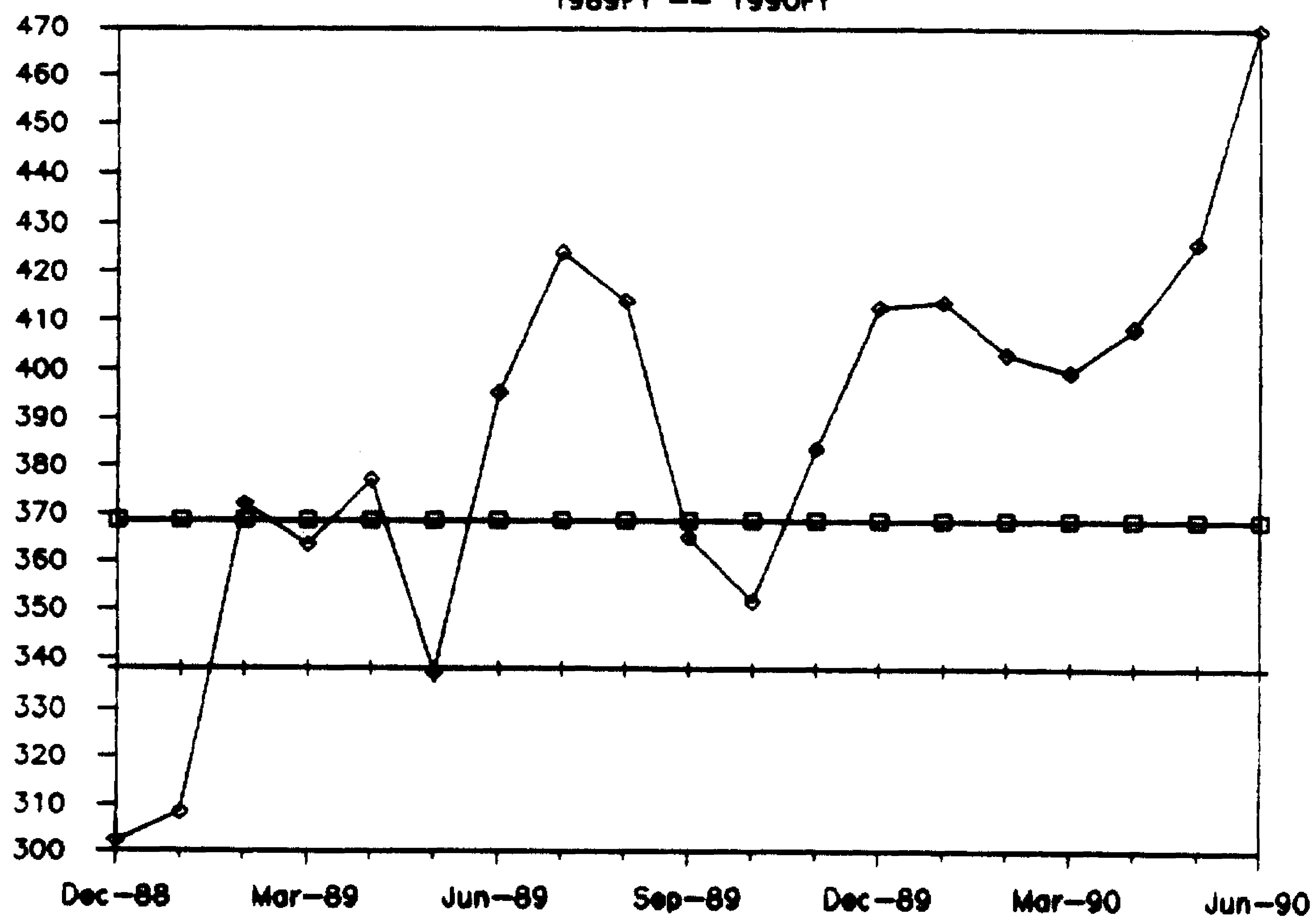


□ 1988 ACTUAL + 1990 GOAL
 ◇ 3 MO. ROLLING AVG.

WASTEWATER DISCHARGE VS. GOAL

1989FY -- 1990FY

MM LBS WASTEWATER/MO.



□ 1988 ACTUAL + 1990 GOAL
 ◇ 3 MO. ROLLING AVG.

ENERGY CONSERVATION - D. A. Moore

	<u>June, 1990</u>	<u>Fiscal Y.T.D.</u>
I. <u>Energy Conservation Data</u>		
A. Unadjusted EUI	<3.1%>	< 7.5%>
B. Adjusted EUI	<3.2%>	< 7.7%>
C. BTU/Lb. Product	2545.0	2640.0
D. Total Energy Consumption MMM BTU	125.50	1181.93

II. Plant Energy Conservation Program

A. Maintenance

There were seven energy related items completed in June, 1990. Six of these items were steam leak repairs. The remaining one was steam trap repairs.

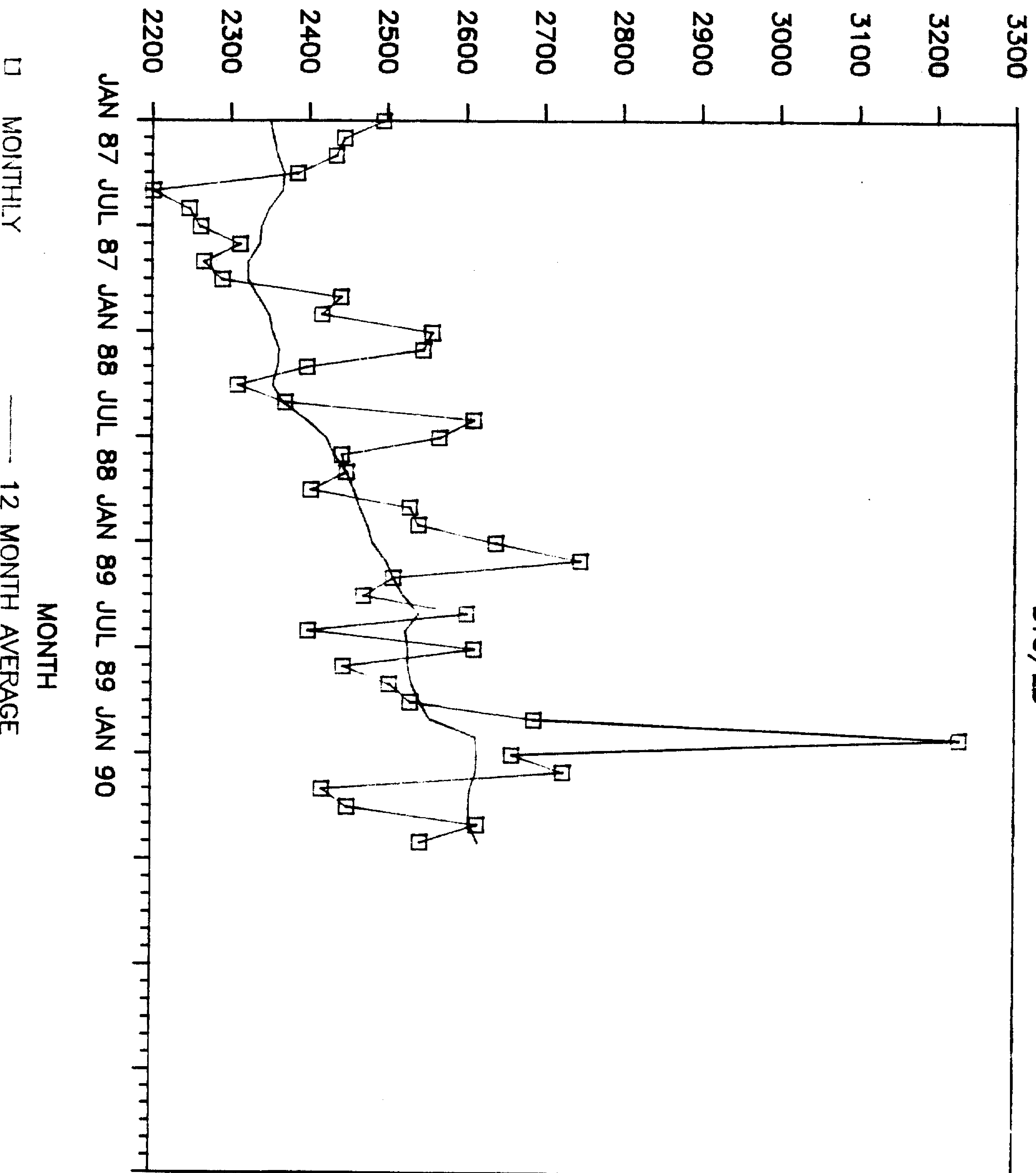
III. Boiler Operation

<u>Boiler</u>	<u>Combustion Efficiency %</u>	
	<u>June, 90</u>	<u>Fiscal Y.T.D.</u>
No. 1	83.3%	83.4%
No. 2	83.2%	83.3%
No. 3	83.0%	83.0%

ABERDEEN ENERGY CONSUMPTION

BTU/LB

BTU/LB



HUMAN RESOURCE REPORT

JUNE, 1990

Personnel - J. E. Beall

Employment

Carma Cook, New Hire

Promotions/Transfers

Robert Williams from Lab Trainee to Head Building Attendant.

Jerry Jenkins from Head Building Attendant to Compound Operator.

Mitchell Bishop bid from General Helper to Lab Trainee.

Erskin Morgan promoted from Yard "B" Operator to Yard "A" Operator

RETIREMENTS

None

TERMINATIONS/RESIGNATIONS

None

TO/FROM LEAVE OF ABSENCE

None

Aberdeen, Mississippi

JUNE, 1990
MONTHLY PERSONNEL REPORT

Salaried Employees 80*

Hourly Employees 172

Total Employees 252

Employees (Hourly)

New Employees 0

Terminations 0

Minority Employees #, %

Salaried 8 10%

Hourly 66 38%

Total 73 29%

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>0</u>	<u>0</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>24</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>38</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 0

APPLICANT BREAKDOWN:

Minority 0 % Minority 0

Female 0 % Female 0

Hires (Hourly):

Month 0 Year to Date 0

Terminations (Hourly):

Month 0 Year to Date 0

Overall Turnover 0

Projected Annual Turnover 0

* This total includes 2 Co-op Students and
2 Summer Process Engineers.

E E N C H E M I C A L P L A N T
 ANALYSIS REPORT
 DISTRIBUTION LIST RWS, JFC, JWU, DEPARTMENT HEADS, FILE
 BY 4/90 THRU 7/1/90

JUNE, 1990

DEPT	STR TIME HRS WRKD	OVERTIME HOURS		OVERTIME AS A % OF STR TIME	ABSENCE HRS LOST	ABSENCE AS A % OF STRAIGHT TIME				TOTAL	YEAR-TO- DATE	VACATION HOURS
		NONCONTROL	CONTROL			SICKNESS	OTHER PAID	NONPAID				
YARD	1144.00	0.00	254.25	22.22	169.00	14.69	0.00	0.09		14.77	3.55	120.00
UTILITY	598.25	0.00	86.75	14.50	1.75	0.00	0.00	0.29		0.29	4.30	72.00
MAINTENANCE	5078.00	0.00	598.00	11.78	202.00	2.21	0.79	0.98		3.98	4.50	640.00
JC LAB	2575.25	0.00	356.75	13.85	144.75	0.00	5.13	0.50		5.62	3.05	172.00
ANALYSTS	296.00	0.00	12.75	4.31	0.00	0.00	0.00	0.00		0.00	0.66	40.00
WAREHOUSE	1007.00	0.00	36.00	3.57	161.00	15.89	0.00	0.10		15.99	13.71	112.00
STORES	300.00	0.00	4.00	1.33	4.00	0.00	0.00	1.33		1.33	1.44	16.00
DEVELOPMENT LAB	877.50	0.00	64.00	7.29	2.50	0.00	0.00	0.28		0.28	0.44	80.00
DRY BLEND	912.00	0.00	133.00	14.58	60.75	0.00	6.58	0.08		6.66	1.52	36.00
COMPOUND	5629.25	0.00	615.75	10.94	394.75	3.82	2.56	0.64		7.01	4.51	452.00
VINYL	5756.00	0.00	788.75	13.70	84.00	0.83	0.42	0.21		1.46	1.51	436.00
PLASTICIZER	703.75	0.00	48.50	6.89	32.25	0.00	0.00	4.58		4.58	3.58	88.00
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	24877.00	0.00	2998.50	12.05	1256.75	2.83	1.61	0.62		5.05	3.60	2264.00

TOTAL PLANT HOURS FOR JURY DUTY..... 0.00
 TOTAL PLANT HOURS FOR NATIONAL GUARD/RESERVE DUTY..... 316.00
 TOTAL PLANT HOURS FOR DEATH IN FAMILY..... 84.00

A R R D E E N C H E M I C A L P L A N T
DEPARTMENTAL HOURS ANALYSIS REPORT
DISTRIBUTION LIST RWS, JFC, JVV, DEPARTMENT HEADS, FILE
10/ 2/89 THRU 6/ 3/90

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
		NONCONTROL	CONTROL			SICKNESS	PAID	OTHER NONPAID	TOTAL			
YARD	10624.00	324.00	1275.00	15.05	249.50	1.36	0.34	0.65	2.35		2.38	968.00
UTILITY	5152.00	192.00	960.75	22.37	252.00	4.89	0.00	0.00	4.89		4.75	524.00
MAINTENANCE	43533.00	339.75	6358.00	15.39	1961.00	3.12	0.40	0.98	4.50		4.56	4224.00
QC LAB	23825.75	516.00	1545.00	8.65	633.75	1.26	0.35	1.05	2.66		2.78	1486.00
JANITORS	2747.00	0.00	85.75	3.12	21.00	0.00	0.58	0.18	0.76		0.73	208.00
WAREHOUSE	8391.25	0.00	630.25	7.51	1155.25	13.01	0.29	0.47	13.77		13.44	672.00
STORES	2468.00	0.00	62.50	2.53	37.00	0.32	0.00	1.18	1.50		1.45	180.00
DEVELOPMENT LAB	7305.75	95.50	625.50	9.87	34.50	0.33	0.00	0.14	0.47		0.46	848.00
DRY BLEND	8166.75	108.00	620.50	8.92	81.00	0.15	0.44	0.40	0.99		0.96	460.00
COMPOUND	50996.25	652.00	5202.50	11.48	2165.50	3.06	0.55	0.64	4.25		4.24	2500.00
VINYL	51529.25	1604.00	4758.75	12.35	801.25	0.35	0.31	0.90	1.55		1.51	2988.00
PLASTICIZER	6375.50	108.00	294.75	6.32	190.75	1.88	0.00	1.11	2.99		3.47	540.00
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	221115	3939.25	22419.25	11.92	7582.50	2.28	0.37	0.78	3.43		3.44	15592.00

TOTAL PLANT HOURS FOR JURY DUTY..... 108.00
 TOTAL PLANT HOURS FOR NATIONAL GUARD/RESERVE DUTY..... 232.00
 TOTAL PLANT HOURS FOR DEATH IN FAMILY..... 472.00

ADMINISTRATIVE SERVICES - D. A. Barclay

Safety

There were no safety instances this month.

Cost Savings

Savings due to competitive bidding were \$8,620 for June, and \$100,039 for FY1990.

Savings due to prompt payment discounts were \$1,645 for June, and \$17,977 for FY1990.

Savings due to using excess materials (AFE and work order stores) was \$17,090 for FY1990.

Warehouse - Finished Goods Inventory

Slow moving and off-grade inventories are still a major concern - approximately 35% of total packaged inventories.

Strategic Initiatives

Joe Lutz, U.E.&C., conducted VMS training during June.

Jack Little met with Price-Waterhouse to discuss activity based cost accounting.

Mickey McGee (EDS) and Gerald Burzynski visited the plant to oversee VMS implementation.

Employee Development

VMS training held during the entire month of June.

Meetings

Various meetings and training sessions for VMS.

ABERDEEN CHEMICAL PLANT
SHIPPING ANALYSIS
JUNE 1966

SHIPMENTS BY PRODUCTS:	MONTH			YTD		
	PUBLIC	IFT/ITC	EXCHANGE	PUBLIC	IFT/ITC	EXCHANGE
RESIN-BULK	21,220,750	8,035,000	0	180,303,922	84,671,010	1,958,400
RESIN-PACKAGED	138,500	141,750	0	2,850,500	1,895,750	0
LEXIBLE COMPOUND-BULK	1,591,390	1,207,350	0	13,353,900	8,853,630	0
LEXIBLE COMPOUND-PACKAGED	2,984,125	113,433	0	28,084,200	1,367,870	0
IN BUSINESS	10,020	0	0	58,090	0	0
RIGID COMPOUND-BULK	1,095,510	1,221,950	0	26,941,720	8,155,350	0
RIGID COMPOUND-PACKAGED	100,793	0	0	1,926,118	268,723	0
OLLING - BULK	0	0	1,029,120	0	0	8,284,190
OLLING - PACKAGED	0	0	0	0	0	128,265
PLASTICIZER	170,820	342,950	0	1,304,280	2,275,010	1,471,810
TOTAL	28,297,900	11,003,093	1,029,120	254,628,730	107,487,143	9,840,685

SHIPMENTS BY MODE-

BULK:	RAILCAR	CUSTOMER PICKUP	COMMON CARRIER	TOTAL
JUNE				
RESIN	141	42	47	230
LEXIBLE COMPOUND	16	0	4	20
RIGID COMPOUND	26	1	12	39
PLASTICIZER	2	0	4	6
TOTAL JUNE	185	43	67	295
YTD				
RESIN	1,321	243	529	2,093
LEXIBLE COMPOUND	113	11	39	163
RIGID COMPOUND	207	16	141	364
PLASTICIZER	21	0	33	54
TOTAL YTD	1,662	270	742	2,674

PACKAGED:	CUSTOMER PICKUP	COMMON CARRIER	TOPC	CONTAINER	AIR/UPS	TOTAL
JUNE						
RESIN	0	11	0	0	4	15
LEXIBLE COMPOUND	28	67	1	0	12	108
RIGID COMPOUND	4	3	0	0	0	7
PLASTICIZER	0	0	0	0	0	0
TOTAL JUNE	32	81	1	0	16	130
YTD						
RESIN	30	112	0	0	64	206
LEXIBLE COMPOUND	281	646	5	0	43	895
RIGID COMPOUND	14	73	0	1	1	89
PLASTICIZER	0	3	0	0	1	4
TOTAL YTD	245	834	5	1	109	1,194

LABORATORY - J. M. Edwards, Jr.

A. Safety - There were no safety incidents in the Laboratory during June. The monthly safety meeting topic was respirator and breathing apparatus training taught by Bruce Trego.

B. Customer Contacts - There was one customer contact during June.

Jim Edwards, accompanied by Mark Washington, visited AT&T Network Systems in Omaha, Nebraska. Two recent contamination complaints were discussed and the packaging of the boxed material was discussed. Cheryl Cincetti presented us with a full Five-Star Rating for our semi-annual vendor rating grade for the end of 1989.

C. Customer O.C. Problem Reports

6/14 Vycom, Scranton, PA

Vycom reported "white streaks" while making gray sheeting. It is suspected that the problem could be from undispersed TiO₂ or line scale in the dryblend. Jerry Janes is investigating. The product is RP-421 WHT 110

6/28 Formtech, Stow, OH

Formtech reported finding metal contamination in RP-91 WHT 110 bulk trailers. The contaminate was ground ferrous magnetic metal the size of color concentrate particles. No metal contamination was found in the retains from the suspected shipment lots.

06/29 Madison Cable Corp., Worcester, MA

Gordon Snyder at Blane reported that Madison Cable's screens were clogging up on 1 1/2 to 2 hours with white fines using 384 FR NAT. Austin R&D analyzed the white contamination and found it to be very high in aluminum concentration. The aluminum trihydrate used in the compound was Aluchem AC 712K (lots V0289-00286, 0131 and 766870).

D. Requests for Corrective Action

There were no requests for corrective action during the month of June.

E. Product Waivers

<u>Customer</u>	<u>Product</u>	<u>Reason</u>	<u>No.</u>
Dayton Extruded	RP-151 WHT 145	Color	2 R/C

LABORATORY - ContinuedF. RVCM SummaryRVCM 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 June, 1990.

	Reactor <u>Slurries</u>	<u>5265</u>	<u>Drier</u> <u>5305</u>
Number of Samples	865	22	80
Average RVCM, ppm	124	0.214	0.243

RVCM of Shipment Samples

The following is a summary of the residual VCM analysis of shipment samples for the month of June, 1990.

<u>Product</u>	<u>Number of Samples</u>	<u>Average RVCM, ppm</u>
5265	33	0.063
5305	93	0.103
5385	54	0.311
5395	9	0.043
5415	60	0.034
Dry Blend	54	0.065
Debox	8	0.199
Pond	4	0.603

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

	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5395</u>	<u>5415</u>
Bulk Density	1.60	1.07	1.67	0.11	1.23
Inherent Viscosity	4.33	1.67	0.50	0.26	0.89
(vs. 0.715 - 0.744)	----	0.83	----		
L Color	11.67	3.17	4.00	13.00	6.67
A Color	6.67	7.33	----		
B Color	5.33	2.33	2.17	2.50	6.33
% on Pan	0.52	1.28	0.83	0.88	2.67
(vs. 2%, max.)	----	----	----	----	0.17
% thru 140 Mesh	0.39	0.69	0.91	0.63	3.33
Drytime	----	----	1.67	0.89	2.00
Mets I.R.	----	----	----	2.99	3.46
(vs. 95% of control)	----	----	----	----	1.85
Hard Particles, (% > 10)	----	----	37.5	0	2.3
Average particle size, microns	139	136	161	145	172

LABORATORY - Continued

H. Flexible Compound Quality Summary

	<u>Adjustments</u>		<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>	<u>M Lbs.</u>	<u>(%)</u>
Hardness	47.0	<0.77>	39.5	<0.65>
Color	----	----	9.8	<0.16>
Hard Particles	----	----	88.0	<1.45>
Heat Stability	12.0	<0.20>	----	----
Contamination	----	----	10.2	<0.17>
Dicing	----	----	16.8	<0.17>
Cross Contamination	----	----	14.4	<0.24>
Totals	59.0	<0.97>	178.7	<2.95>

I. Rigid Compound Quality Summary

	<u>Rejections</u>	
	<u>M Lbs.</u>	<u>(%)</u>
Torque Rheometry	3.3	<0.07>
Color	7.8	<0.17>
Total	11.1	<0.24>

J. Miscellaneous

1. The program to extract data from the resin shipment database for importing into letters of analysis is complete. A list is being prepared on the letters that will need to be converted using PFS Write to accept the data.
2. After a floppy disk failure of an often used program, a complete backup was made of all important disks managing lab data.
3. Dave Cox met with Witco and Vista R & D representatives to discuss wax properties, wax QC and calcium stearate specifications.
4. Dave Cox examined and evaluated an on-line particle size tester marketed by Lazentech. The instrument failed to reproduce the data and could not tell the difference between resins of different average size.
5. Another precision test was done on the Sintech tensile and elongation tester. The results still indicate an assignable cause error.
6. Work was started (process flow written) to check raw material Certificates of Analysis against specifications and quarantine of non-complying materials.
7. The RVCM headspace analyzer failed once due to a black carbon dust buildup on the circuit boards.

LABORATORY - Continued

8. The Inherent Viscosity analyzer pneumatic mechanism was repaired twice in June. Major work and downtime on this instrument is likely to be needed soon.
9. The Brabender computer went out during a power outage. It was out for repairs for two weeks and still was out at the end of the month. The Caulter Counter particle size analyzer computer was used during this time which has delayed testing Austin R & D autoclave resin besides slurry samples from the plant.
10. Jim Edwards was trained in Houston to implement the Customer Needs Response Program. This program was activated 06/29/90.
11. The lab worked with Price Waterhouse personnel in determining resources and costs associated in analyzing each individual resin, compound, dryblend, and plasticizer product.
12. All 6 laboratory natural teams met once during the month of June.