

File Copy

To: T. H. Huffman

From: R. W. Seymour

Date: May 18, 1988

**Interoffice
Communication**

Subject: ABERDEEN MONTHLY PROGRESS REPORT
APRIL, 1988

VISTA

There were no injuries recorded during the month of April. As of April 30, 1988, the plant had operated 3,222 days or 4,189,521 manhours without a lost time injury.

PVC resin production for April was 39.6MM pounds with a reactor stream factor of 93.9%. Resin production year-to-date totaled 277.1MM pounds. The VCM efficiency for April was 1.00822 pounds of VCM per pound of PVC produced versus a 1.00756 standard. Cumulative VCM efficiency is 1.01259 pounds per pound.

Compound production for April was 7.96MM pounds. Lines I, III and V all operated thirty days during the month. Cumulative production was 53.0MM pounds of compound. Quality performance for the month was 1.4% off-grade all of which was mill scrap. There was no "BC" production.

Dry blend production was 6.15MM pounds for the month setting another consecutive monthly production record. Year-to-date production was 38.5MM pounds. Quality performance for April was 99.2% customer grade.

The plasticizer unit operated twenty-eight days in April to produce 1.67MM pounds. Cumulative plasticizer production was 12.4MM pounds.

During the month, the three-day part of the Team Management Training for salaried personnel was completed. Several Natural Teams met in April and a team of plant employees made a customer visit to Comm/Scope's communication cable production plant in Catawba, North Carolina.

Total energy consumption for April was 127.932MMM BTUs. The energy consumption per pound of product was 2310 BTUs, resulting in an adjusted CMA reduction of 54.0%. The adjusted CMA reduction for fiscal 1988 year-to-date is 52.4%.

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The total plant variable cost variance for April was \$2090.3M unfavorable, resulting from an overall unfavorable price variance of \$2333.1M and a favorable efficiency variance of \$242.8M. Year-to-date plant price and efficiency variances were \$12,139.7M negative and \$740.5M positive, respectively. The total fixed cost variance for April was \$6.7M unfavorable with the cumulative variance of \$429.5M favorable.


R. W. Seymour
Plant Manager

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SAFETY - K. L. Fogg, J. V. Uptain

<u>Occupational Injuries</u>	<u>April</u>	<u>Fiscal Y.T.D. 1988</u>	<u>Fiscal Y.T.D 1987</u>
First Aid	0	6	6
OSHA Recordable	<u>0</u>	<u>1</u>	<u>6</u>
Total Injuries	0	7	12
Number of Restricted Workday Cases	0	0	2
Number of Lost Workday Cases	0	0	0

Injuries by Department

Vinyl Operations	0	1	2
Compound Operations	0	1	1
Maintenance	0	4	6
Laboratory	0	1	1
Receiving/Warehouse	0	0	2
Office	<u>0</u>	<u>0</u>	<u>0</u>
Totals	0	7	12

Injuries by Type

Cuts and Abrasions	0	2	6
Eye Injuries	0	0	2
Burns	0	2	0
Bruises	0	2	1
Strains/Sprains	0	0	3
Stings	0	0	0
Other	<u>0</u>	<u>1</u>	<u>0</u>
Totals	0	7	12

Non-Occupational Injuries

Lost Workday Cases	1	8	4
Days Lost	14	113	34

Safety Record

Last lost time injury 7/5/79
Days since - 3,222
Manhours since - 4,189,521

On April 30, 1988, the employees of the Aberdeen plant completed 3,222 days with no lost time injury.

Topics for the plant safety meetings during the month included: Annual First Aid Training, Vessel Entry, Safety Performance Reviews, and Maintenance Weekly Safety and Job Reviews.

SAFETY - Continued

The Local Emergency Planning Committee for Monroe County met in April.

First aid training was conducted in April. The Central Safety Committee met in April.

Keith Fogg met with the Monroe County Board of Supervisors to discuss SARA activities.

April was an injury-free month for the Aberdeen Plant. Hands-on physicals utilizing two local physicians started in April.

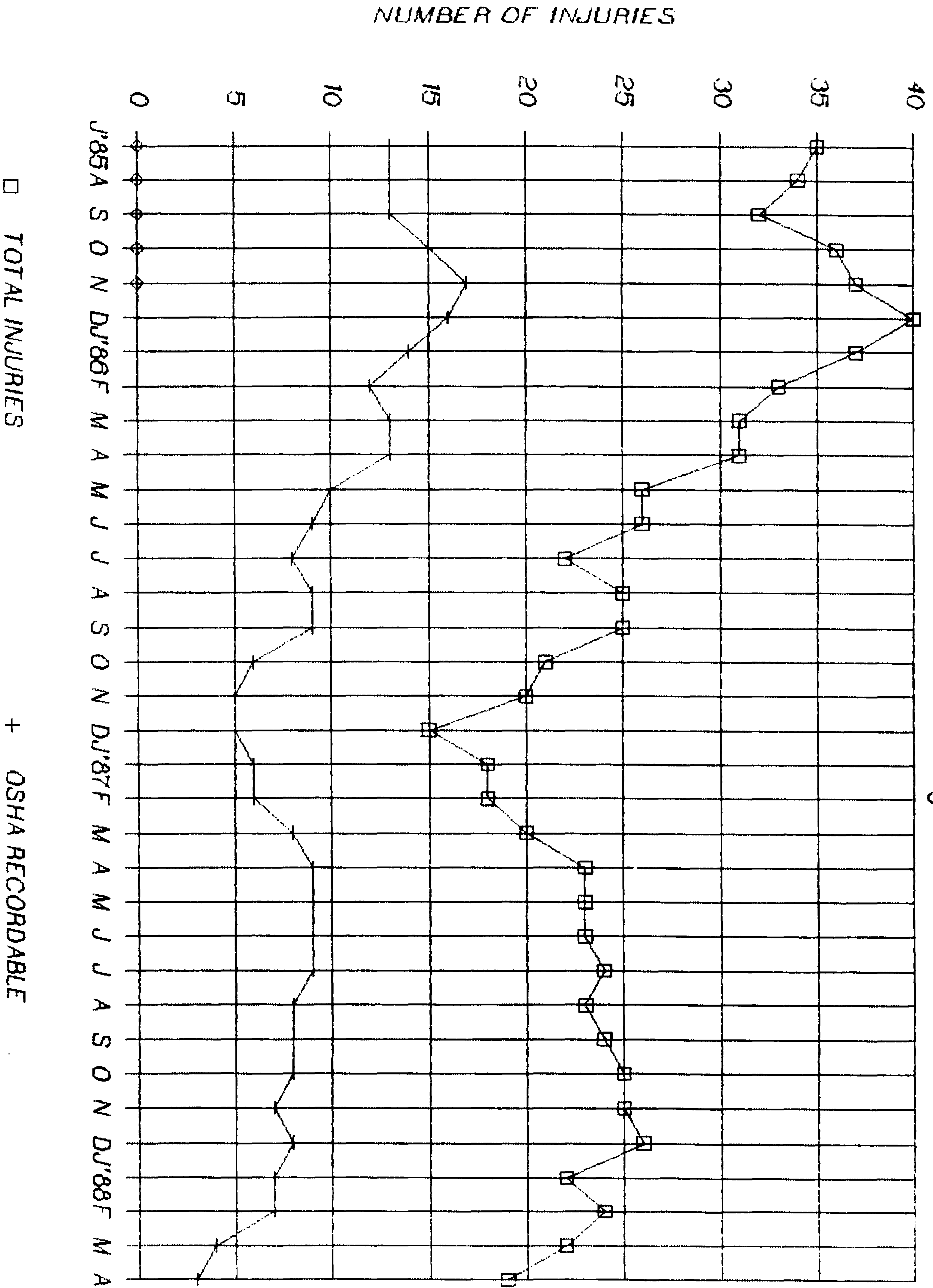
Routine dosimetry results for the month are as follows:

<u>Chemical</u>	<u><</u>		<u>></u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
VCM	69	98.6	1	1.4
Lead	7	100.0	0	0.0
Total Particulates	2	100.0	0	0.0

The single VCM over-exposure was with benefit of respiratory protection.

ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)



PLANT FIXED COSTS - R. W. Seymour

Fixed costs for April were \$1,283.1M versus a budgeted \$1,276.4M for an unfavorable variance of \$6.7M. The following is an analysis of this month's variances:

<u>Major Category</u>	<u>Variance vs. Budget</u>	
	<u>April, 1988, \$M</u>	
	<u>April</u>	<u>YTD</u>
Payroll and Benefits	(69.0)	(89.0)
MM&C	46.0	250.8
T&I	16.7	64.2
Miscellaneous	(0.4)	203.5
	<u>(6.7)</u>	<u>429.5</u>

Payroll and Benefits are unfavorable due to benefits charges for the month being at 25.9% of total payroll (budget was 15.9% of base payroll) and overtime due to the operation of Line V on a full time basis with budget basis being a two-shift operation. MM&C expenditures are favorable due to lower than budgeted maintenance materials and several extraordinary contract projects. The Miscellaneous category was essentially at budget for April.

QUALITY MANAGEMENT PROCESS - D. W. Hollis, R. B. Newton

1. Completed two three-day sessions of Team Management Training for salaried personnel. The remaining two days of the training will be given in May.
2. Assisted Marketing in making a video of the Quality Management Process in Aberdeen.
3. Assisted in planning of open houses to communicate emissions required by SARA Title III.

VINYL - P. J. KoberSafety

The Vinyl and Yard Departments worked without an injury during April, 1988.

The monthly safety meeting topic was "First Aid Training". The instruction was provided to all personnel by the Plant Nurse.

Quality Management Process

The Department Superintendent's Natural Team met in April. Topics discussed included the purpose of a natural team, Quality Implementation Plan action steps, and team recognition. Plans were laid out for a customer visit.

There are four active employee involvement teams in the department. Each team met at least once during the month and all teams are making good progress on their projects. The Railcar Cleaning Team is preparing their presentation for Plant Management to request funds to purchase and install a cleaning system. The 5265/5305 Contamination Team is trying various methods of reactor cleaning to reduce wall scale buildup on D700 and D745. The V-11 Dust Team is pursuing repairs and modifications to the equipment on the sifter deck in the V-11 dryer room and the Plasticizer Team is proceeding with designs to limit spillage and contamination in the unloading area.

<u>Production</u>	<u>April</u>	<u>Y.T.D.(Fiscal 88)</u>
1. Production, MM Lbs.	39.6	277.1
2. Daily Production Rate, M Lbs./C.D.	1321	1300
3. Total Charges	935	6545
4. Charges, Reactor Batches/C.D.	31.2	30.7
5. Reactor Stream Factor	93.9	92.8
6. Dryer Rate, Average Lbs./Hr.	9784	9657
7. Dryer Stream Factor	70.3	70.6
8. Accounting Days	30	213

Reactors

The reactor stream factor for April, 1988, was 93.9%. Downtime in the reactor area occurred as follows:

- 1) Operational Downtime: Accounted for 69.2% of the total downtime and was due to reactor recovery scheduling conflicts, downtime due to rinsing the chem wash tank, waiting on particle size data before charging, power failures, inclement weather, blend tank availability, and new module rinse/charge water conflicts.

VINYL - Continued

Reactors - continued

- 2) Maintenance Repair/Revision Downtime: Accounted for 30.8% of the total and was due to hydroblasting D700 and D745 reactors, replacing D300 chem wash line, repairing new module water line, vent line repair, maintenance to recovery vacuum pumps and compressors, and miscellaneous valve repairs and replacements.

Dryers

The dryer stream factor for April, 1988, was 70.3%. Downtime in the dryer area occurred as follows:

- 1) Reactor Limited Production: Accounted for 88.9% of the total downtime. Dryers were shut down when possible for energy conservation.
- 2) Operational Downtime: Accounted for 7.9% of the total downtime and was due to centrifuge plugging, dryer cleaning, activator transfer problems, burner flame-outs, and pulsing baghouse socks.
- 3) Maintenance Repair/Revision Downtime: Accounted for 3.2% of the total downtime and included activator maintenance, sock replacement/repairs, repairs to the fluid bed hopper, installing screw feeder switches, and maintenance of rotary effluent lines.

Product Quality Summary

<u>Resin Type</u>	<u>Prime</u>	<u>"B"</u>	<u>"H"</u>	<u>% of Total Production</u>
5265	3,167,765	-	-	7.9
5305	5,563,370	-	-	14.0
5385	16,177,324	-	-	40.8
5415	12,171,309	-	-	30.7
5465	-	-	-	3.2
Debox	-	1,155,780	-	2.9
Off-Grade	-	-	-	0.0
Sifter Overflow	-	-	83,411	0.2
Pond Resin	-	-	108,980	0.3
Total	38,278,588	1,155,780	192,391	100.0

Monthly Variable Cost Performance

Variable costs for the month were unfavorable at \$1342.3M resulting from an unfavorable price variance of \$1333.3M and an unfavorable efficiency variance of \$9.0M. Resin variable cost for April, 1988, was 25.086 cents per pound versus the budget at 21.579 cents per pound.

The unfavorable price variance was due to VCM pricing at \$1398.3M unfavorable.

VINYL - ContinuedMonthly Variable Cost Performance - continued

VCM efficiency for the month was 1.00822 pounds per pound of PVC produced versus the budget at 1.00756 pound per pound. This resulted in an unfavorable variance of \$6.0M. Above budget initiator concentrations resulted in an unfavorable variance of \$58.4M. The higher concentrations were used in an effort to maximize production.

Energy Performance/Progress

Plant energy performance for April, 1988, was 2723 BTU/lb.

General

The resin raw material in the 744 account was valued at \$279.5M.

COMPOUND - C. W. Turner, S. C. Hillman

Safety

The Compound Department worked without injury in April, 1988.

April's monthly safety meeting was a review of first aid and CPR training.

Quality Management Process

During April, a team of plant employees visited Comm/Scope's communication cable production plant in Catawba, NC. Trip participants were a compound shift supervisor, a compounder, a compound operator, a compound utility, the quality control supervisor, the lead warehouseman, and the compound operations superintendent. The objective of the trip was to strengthen the supplier/customer relationship with Comm/Scope and discuss the use of our compound at their facility.

The Compound Operations Superintendent Natural Team met in April. The meeting included all compound shift supervisors. The main topics included control charting progress and changes, utility training procedures, and ways to reduce off-grade production. The shift supervisors will be generating new charts for use in compound and dry blend.

The Chris Turner visited two dry blend customers, Dayton Extruded Plastics and U-Brand Corporation, during April to discuss dry blend performance and our quality program. A presentation was made to U-Brand supervisors and operators about Aberdeen's dry blend process and quality management and safety programs.

<u>Compound Production</u>	<u>Operating Days</u>	<u>Production (M Pounds)</u>		
		<u>Month</u>	<u>Average</u>	
			<u>Operating Day</u>	<u>Fiscal</u>
			<u>Rate</u>	<u>Y.T.D.</u>
Line I	30	2300	77	16662
Line III	30	4059	135	27249
Line V	30	1605	53	9113
Total		7964		53024

Line I operated thirty days in April at an average rate of 77M pounds per day. Major items affecting production efficiency were: product changes, 92 hours; quality problems, 15 hours; dicer problems and maintenance, 15 hours; and transfer line pluggage problems, 8 hours.

Line III operated thirty days in April at an average rate of 135M pounds per day. Major items affecting production were: product changes, 53 hours; quality problems, 20 hours; and mill lube system maintenance, 19 hours.

COMPOUND - continued

Line V operated thirty days in April at an average rate of 53M pounds per day. Major items affecting production efficiency were: ~~quality problems~~, 31 hours; quality problems, 23 hours; and chute pluggage problems, 5 hours.

Quality performance for flexible compounds was 1.4% off-grade of which 100% was due to mill scrap. "BC" production was 0.0%.

The raw material requirement for flexible compounds was 0.99695 pounds of raw material per pound of compound versus a 1.01197 standard (YTD is 1.00627).

The variable cost variance for compound was \$289.4M unfavorable with \$453.0M unfavorable due to price and \$163.6M favorable due to efficiency. The efficiency variance due to product mix was \$78.0M favorable.

Major compound raw material efficiency variances were 610P at \$31.4M favorable, color concentrate at \$13.7M favorable, 610TM at \$11.3M favorable, and Thermoguard WE at \$10.7M favorable.

The favorable variance in color concentrates is due to continued rise of concentrates that are more efficient than budgeted.

Total compound inventory rose 1.70MM pounds in April to 8.59MM pounds.

<u>Dry Blend</u>	<u>Month</u>	<u>Average Operating-Day Rate</u>	<u>Fiscal Y.T.D.</u>
Production, M Pounds	6151	205	38556
Operating Days	30	-	213

Dry blend operated thirty days in April at an average rate of 205M pounds per day. Production included 80273G WHT 110, 80172C WHT 110, 90172D WHT 110, RP-100 WHT 142, RP-201T NAT 101, RP-421 WHT 110, 180-31 WHT 138, 269-151 WHT 145, 269-185 WHT 144, 290-61 WHT 121, 378-06 WHT 141, 378-09 WHT 141, 317-91 WHT 91, 317-129 WHT 110, and 317-206 WHT 110.

The April, 1988 production of 6.15MM pounds surpasses the previous monthly production record of 5.88MM pounds set in March, 1988. Production of rigid profiles comprised 33% of the April, 1988 product versus 36% in March, 1988.

Dry Blend production was hindered by: blender transfers, 60 hours; product changes, 40 hours; scale problems and maintenance, 26 hours; quality control, 21 hours; screener inspections and maintenance, 11 hours; transfer system pluggage and maintenance, 11 hours; star valve maintenance, 9 hours; and Welex maintenance, 5 hours.

COMPOUND - continued

Dry Blend - continued

Quality performance for the month of April was 99.2% customer grade.

The raw material requirement for dry blend was 0.99986 pounds of raw material per pound of dry blend versus a standard of 1.00481 (YTD is 1.00590).

The variable cost variance for dry blend was \$392.2M unfavorable with \$489.5M unfavorable due to price and \$97.3M favorable due to efficiency. The efficiency variance due to product mix was \$73.0M favorable. The only major raw material efficiency variance was liquid stabilizer at \$25.9M favorable.

<u>Plasticizer</u>	<u>Month</u>	<u>Average Operating-Day Rate</u>	<u>Fiscal Y.T.D.</u>
Production, M Pounds	1672	56	12363
Operating Days	28	-	211

Plasticizer operated twenty-eight days in April at an average rate of 56M pounds per day. Production included 610P and 108P.

VRP production totaled 59.2M pounds (3.5%).

The raw material requirement for plasticizer was 1.11561 pounds of raw materials per pound of plasticizer versus a 1.10133 standard (Y.T.D. is 1.09198).

The variable cost variance for plasticizer was \$66.3M unfavorable with \$57.4M unfavorable due to price and \$9.0M unfavorable due to efficiency. The only major raw material efficiency variance was Alfol 610 Alcohol at \$11.0M favorable.

The efficiency variance due to product mix was \$4.3M favorable.

Energy

	<u>Usage (BTU/Lb.)</u>	
	<u>Actual</u>	<u>Standard</u>
Compound	1663	1758.0
Dry Blend	682	720.0
Plasticizer	1705	1550.6

MECHANICAL DEPARTMENT - T. F. Lyon

MAINTENANCE - D. A. Miller

Safety

There were no reported injuries to Mechanical Department personnel during the month.

Quality Management Process

The Engineering Project Report was issued to all plant employees. This report is intended to keep employees up-to-date on current engineering projects and priorities.

The Maintenance Training Team completed interviews of all hourly maintenance employees. The data retrieved during the interviews will be used to develop a "Skill Needs Assessment".

Seven Mechanical Department employees attended three days of team management training.

Vinyl

Reactors D700 and D745 were hydroblasted during the week of April 11 in preparation for a 5305 run.

The chem wash and rinse piping on reactor D300 was replaced due to external corrosion. The piping arrangement was simplified and two automatic valves were eliminated.

The recovered VCM condensers in the old module were cleaned. The north condenser required a code weld repair to the shell.

The centrate heat recovery trim heater required cleaning due to tube side fouling.

The following major valves were changed:

- D300 sprayhead flush block valve
- D744 chem wash return valve
- D700 polyvic ram valve
- D745 polyvic ram valve
- D700 catalyst ram valve

The following rotating equipment repairs were performed:

- Mechanical seals were changed in the following pumps and compressors:
 - o ERS north seal water pump
 - o New module east VCM charge pump
 - o Alcotex charge pump
 - o New module east chem wash pump
 - o East fluid bed hot water pump
 - o Old module "B" vacuum pump

MECHANICAL DEPARTMENT - continued

Vinyl - continued

- "B" vacuum pump in the old module was replaced with a spare due to gland corrosion and poor performance.
- The agitator shaft in the BPA make-up tank was replaced.
- The west new module cooling water pump motor was changed due to rough bearings.

Instrument technicians assisted in the installation and checkout of the instrumentation associated with the Reactor Heat-up Loop Project and the temperature compensated VCM meters.

Dryer Area

The north and south fluid bed dryer rotary air locks were replaced and rebuilt.

The following work was performed on #6 dryer:

- The dust collector explosion vent was repaired.
- A gas supply line blind was installed.
- The inlet screen was repaired.
- The dust collector air surge pot was re-gasketed.

The #8 centrifuge main radial bearings were replaced.

Motors were replaced on the #5 dryer Sweco and star valve, and on the debox Sweco.

The exhauster bearings were replaced on 747 blend tank.

Compound, Dry Blend, Plasticizer

The 412 silo cyclone separator was repaired due to erosion.

The 479 silo rotary airlock was overhauled.

The spare laboratory two-roll mill was rebuilt.

The quarterly weigh scale calibration was completed.

MECHANICAL DEPARTMENT - continued

Compound, Dry Blend, Plasticizer - continued

The following major work was completed on Line III:

- New vacuum filters for the Line III pellet transfer system were installed.
- The spindle assembly for #6 dicer was overhauled.
- The zone 1 hydrotherm pump motor was replaced.
- The lube oil for the Line III mill was changed.
- The front mill roll rotary union was replaced.

The Line V plasticizer weigh tank heating coil was repaired and a permanent steam supply line installed.

Only minor maintenance was performed on Line I.

The following work was completed in the Dry Blend unit:

- A new rotary airlock was installed under "C" blender.
- The D-scale 50-lb. load cells were replaced with 200 lb. load cells. Necessary Orbitran program changes were made to allow the change.
- Screens were replaced in the south Gump and south Kason screeners.

The following work was accomplished in the Plasticizer unit:

- T-400 (PA charge tank) was inspected, new supports installed and the asbestos insulation removed and replaced with mineral wool.
- A strainer was installed up-stream of the alcohol charge meter.
- The R-1 agitator motor and gearbox pinion oil seal were replaced.
- Minor steam leaks were repaired.
- The PA charge pump was overhauled.
- The PA vent collection blower bearings were replaced.
- The R-3 safety discs were replaced.

MECHANICAL DEPARTMENT - continued

Utilities

Two water well pressure regulating valves were rebuilt.

The boiler house deaerator was inspected by Vista and our insurance carrier. No problems were found.

The coupling was replaced on #4 boiler feedwater pump.

The Deltech air dryer alarms were modified to indicate a compressor shutdown.

Motors were replaced on #2 aerator and pond #3 and #6 aerator on pond #4.

MECHANICAL ENGINEERING - R. E. Polk

AFE F596/A717 - Reactor Heat-Up Loop

Construction is complete including punchlist items. Start-up and commissioning is planned for the week of 5/09/88.

AFE F786/F557 - Resin Quality Improvement

Concrete work is 51% complete and in progress. The first floor of the SA building has been poured. Steel erection is complete and decking for the second floor started. Piping and mechanical installation is 31% complete and in progress. Electrical installation is planned to commence in mid-May.

AFE F587 - Laboratory Addition

Final painting and trim work is completed. Mechanical equipment installation is in progress. Project completion is planned for the week of 5/16.

AFE D707 - VCM Unloading Fire Protection

All construction is complete except for the Texas Automatic Sprinkler piping and final painting. Texas Automatic is scheduled to be completed by 7/1. Project completion is planned for 8/1.

AFE A538 - Reactor Condenser Revisions

Delivery of the new condenser is planned for the week of 5/16. Installation of this condenser on D-600 is planned for early June. Project completion is planned for 9/1.

AFE D608 - Dryblend Orbitran Replacement

Software development is in progress and planned for completion in mid-May. An initial checkout of the Fisher Univox was completed in Austin. It was shipped to Houston for final staging at Puffer-Swieven. Shipment to the plant is planned for 6/6. Installation is tentatively planned during a Dry Blend outage scheduled for 7/5-14.

AFE B548 - Plasticizer Lighting Upgrade

Bids have been requested on the lighting installation. All equipment has been received. Construction is planned to begin the week of 5/16 with completion in mid-June.

AFE D638 - Boilerhouse MCC Replacement

The design has been completed and all major equipment placed on order. Basis of bids preparation is in progress. Installation is planned for completion in August.

MECHANICAL ENGINEERING - continued

AFE F598 - Line I Screeners

Design is 90% complete and in progress. Major equipment items are on order and scheduled for delivery in mid-May. Construction is planned for completion in August.

PROCESS ENGINEERING - V. E. Messick

Resin Quality Improvement Project

All field tie-ins were reviewed for reactor downtime requirements. Assistance to construction activities continue on an "as needed" basis. Review of the I&E design package for the Atmer feeders was completed in April.

5415 Production in the Old Module

Modifications to the out-of-service fluid bed dryer heating panels have begun. A meeting was held with the manufacturer of the steam injection water heating unit to discuss system limitations. These efforts are directed toward higher 5415 drying rates.

VCM Storage and Handling Information Team

Areas covered in April included fire protection systems and VCM leak handling.

Resin Debottlenecking

Work is underway to develop an overall schedule of debottlenecking efforts and manpower requirements.

Alternate Natural Gas Supply

A meeting was held with GED, PED, Purchasing and the plant to review the project scope and cost estimates received for the pipeline.

Boiler Safety Team

A presentation by the team was given to plant management outlining the team's recommendations. Priorities will be assigned to the various suggested items.

Dryer Baghouses

A summary of a study to investigate dryer baghouse problems was issued. Preliminary recommendations include replacing existing baghouses with larger, easier to maintain collectors.

Railcar Cleanout Team

A class "A" design was issued for the railcar cleaning system. Team and process design review meetings were held. The project will be budgeted for the fourth fiscal quarter 1988.

PROCESS ENGINEERING - continued

Dry Blend Orbitran Replacement Project - Kenny Akins completed two weeks of Univox Configuration school at Fisher in Austin, Texas. He also assisted GED with construction of time sequence diagrams. More review meetings were held with Operations to discuss displays, proposed unit operation, etc.

Dry Blend Rate Improvements

The damaged variable speed drive unit was replaced. A new small star valve was installed on "C" blender.

PA Scrubber Modifications - Modifications were completed and operating procedures issued.

PA Fluff Containment

The operating procedures for the desublimation box were issued for review.

Reactor Heat-Up Loop

Preliminary reactor heat-up loop start-up to check the mechanical equipment was completed. The operating manual and the start-up procedure to heat-up a reactor charge were issued for review.

Line III Vacuum Filters

The new Line III blower vacuum filters were installed and are operational.

Alloy Project

Carl Tomanek sent the new alloy recipes to the plant for review. MSDS's are being received for approval to bring new raw materials into the plant for a trial run of the new alloys.

Lead Bag Disposal

A customer has been found who will take PVC bags with residual lead. A truckload of lead in PVC bags was ordered for a trial at the plant.

Bird Rinse Water Modifications

The rinse water modifications to a Bird centrifuge for a test at the plant were approved. Our centrifuge at Bird Machine is being modified to run rinse water. Shipment is expected near the end of May.

Metal Detectors - Line III

Troubleshooting on the Line III metal detectors was completed. The metal detector installation has been revised in the field. Rebuilt sub-panels are to be received in early May.

PROCESS ENGINEERING - Continued

Dry Calcium Stearate Addition

The fluid bed main screw feeder has been calibrated. Review of the I&E design package for the remaining feeders was completed. Preliminary start-up tests were completed. The operating manual first draft is being revised. The rotary dryer CaSt designs are being revised to decrease space requirements.

Lab Ventilation Team

The team presented a solution to the Brabender fume problem to Management. A miscellaneous capital AFE request to build and install the team designed vent hoods was approved.

Chem Wash Conducting Probes

The conductivity probe and monitor was received and pressure checked. Installation is expected next month.

SARA

Calculations to determine section 313 emissions were completed. A summary table was issued to T. G. Grumbles for an executive briefing. Also worked with contractor hired to do modeling study.

Winter Safety Showers

Four options were evaluated and presented to the Central Safety Committee meeting. The committee decided to install one winter safety shower at the sulfuric acid tank area. A miscellaneous AFE request was written to complete this project.

Alternate Water Supply

Samples from the pilot well were collected and analyzed. Electric logs were also obtained. The information shows the Coker aquifer to be good.

HUMAN RESOURCE REPORT

PERSONNEL - J. E. Beall

EMPLOYMENT

Sonya L. Hill, New Hire

PROMOTIONS/TRANSFERS

Joe Beall promoted and transferred from Employee Relations Representative LCCP, to Director of Employee Relations Aberdeen.
Robert A. Miller promoted and transferred to Director of Employee Relations LCCP.
William Parks from Compounder to Lab Trainee.
David Plunkett promoted from General Helper to Vinyl "A" Operator.
Charles Smith from Compound Shift Supervisor to Maintenance Supervisor.
Nathaniel Wilson promoted from Vinyl "A" Operator to Chief Operator.

RETIREMENTS

None

TERMINATIONS

James Hill, Jr.
Norma Springfield, resigned

TO/FROM LEAVE OF ABSENCE

None

Aberdeen, Mississippi

APRIL, 1988
MONTHLY PERSONNEL REPORT

Salaried Employees 71*Hourly Employees 170Total Employees 241Employees (Hourly)New Employees 0Terminations 0

Minority Employees # %

Salaried 7 10%Hourly 67 39%Total 74 31%

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>7</u>	<u>44</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>15</u>	<u>7</u>	<u>47</u>	<u>0</u>	<u>4</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Maintenance	<u>40</u>	<u>39</u>	<u>9</u>	<u>23</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>6</u>	<u>25</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>27</u>	<u>69</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Vinyl	<u>32</u>	<u>32</u>	<u>9</u>	<u>28</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 13 Year to Date 13

APPLICANT BREAKDOWN:

Minority 7 % Minority 54# Female 1 % Female 8

Hires (Hourly) :

Month 0 Year to Date 4

Terminations (Hourly) :

Month 1 Year to Date 1Overall Turnover .6%Projected Annual Turnover 1.8%

* Includes 1 temporary employee and 1 Co-op Engineer.

OVERTIME AND ABSENTEEISM

Department	Straight Time Hours Worked	Overtime Hours Worked		Overtime as a % Of Straight Time	Absence Hours Lost	Absence as a % of Straight Time	
		Controllable(1)	Non-Controllable(2)			Sickness	Other Total F.Y.T.D.
WAREHOUSE	1439.25	58.50	-----	4.06	1	.00	.07 3.01
YARD	1252.50	219.75	-----	17.54	2	.00	.16 4.93
MAINTENANCE	4814.50	495.75	-----	10.30	40	.00	.83 .95
LAB	3389.75	527.25	-----	15.55	236	6.13	.83 6.96 2.98
COMPOUND	7102.00	1007.00	-----	14.18	277	2.70	1.20 3.90 2.53
VINYL	5830.50	468.75	-----	8.04	163	2.67	.12 2.79 3.78
PLASTICIZER	780.00	31.25	-----	4.01	4	.00	.51 .51 3.05
UTILITY BOILER	624.00	69.75	-----	11.18	0	.00	.00 .00 .00
GENERAL PLANT	664.00	12.00	-----	1.81	0	.00	.00 .00 .14
TOTAL	25896.50	2890.00	-----	11.16	723	2.15	.64 2.79 2.60

(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.

ENERGY CONSERVATION - F. G. Jeanson

I. Plant Operations

Total energy consumption for April was 127.932 MMM BTUs. Energy consumption decreased to 2310 BTU/lb. from 2397 BTU/lb. in March. An adjusted CMA reduction of 54.0% was obtained for the month. The adjusted CMA reduction for fiscal 1988 is 52.4%.

II. Plant Energy Conservation Program

Maintenance

There were twenty-two energy related items completed in April. Nineteen of these items were steam leak repairs. The remaining three were steam trap repairs.

III. Boiler Operation

<u>Boilers</u>	<u>Combustion Efficiency %</u>	
	<u>April, 1988</u>	<u>April, 1987</u>
No. 1	83.7	(1)
No. 2	(2)	83.4
No. 3	83.2	83.2

Note: (1) Boiler number one was not operated during the month.

(2) Boiler number two was not operated during the month.

ENERGY CONSERVATION DATA

	<u>1988</u>	<u>1987</u>
<u>Month</u>	<u>April</u>	<u>April</u>
<u>Production, MM Lbs.</u>		
Resin	39.6	34.8
Dry Blend	6.2	4.2
Compound	8.0	7.3
Plasticizer	1.6	1.9
TOTAL	55.4	48.2
<u>Natural Gas</u>		
Consumption, MSCF	66353	56481
Conversion, BTU/SCF	1020	1020
Energy Consumption, MMM BTU	67.680	57.611
Energy Consumption, BTU/lb.	1222	1195
<u>Electricity</u>		
Consumption, MM KWH	6.0252	5.7486
Conversion, BTU/KWH	10000	10000
Energy Consumption, MMM BTU	60.252	57.486
Energy Consumption, BTU/lb.	1088	1193
<u>Propane</u>		
Consumption, M Gal.	0	0
Conversion, BTU/Gal.	92000	92000
Energy Consumption, MMM BTU	0	0
Energy Consumption, BTU/lb.	0	0
<u>Total</u>		
Energy Consumption, BTU/lb.	2310	2388
Energy Consumption, MMM BTU		
Actual Unadjusted	127.932	115.097
Actual Adjusted	106.510	95.229
1972 Base Period	231.397	205.221
<u>OMA Reduction (%)</u>		
Adjusted	54.0	53.6
Unadjusted	44.7	43.9
Fiscal 1988 Year-to-Date	52.4% Adjusted	
Performance	42.7% Unadjusted	

ENVIRONMENTAL - R. A. Frohreich

Water

All wastewater discharge parameters were within NPDES limits in April.

RCRA

The 1987 Hazardous Waste Biennial Report forms were completed and submitted to the State.

One truckload of drummed waste and one truckload of floor sweepings were shipped to Chemical Waste Management.

Two truckloads of reactor culls were purchased by Sun Polymers.

One truckload of building ventilation dust was purchased by Surplus Chemicals Marketing.

General

VCM emission data was provided to Scott Environmental Technology. Scott will use the information to perform a dispersion air modeling study.

TABLE I
WATER COMPLIANCE WITH
NPDES PERMIT PARAMETERS

		Flow	BOD		COD		Sus. Solids		Diss.	NH ₃	pH
		GPM	PPM	LB./DY.	PPM	LB./DY.	PPM	LB./DY.	O ₂	LB./DY.	
Oct. -	Ave.	1229	5	77	28	433	10	147	8.4	1.8	7.5
	Max.	1264	7	100	39	553	15	215	8.6	2.9	7.9
Nov. -	Ave.	1222	15	212	43	607	22	310	7.4	1.4	7.5
	Max.	1430	22	378	65	1117	25	370	7.9	1.7	7.8
Dec. -	Ave.	1083	8	106	35	468	14	191	7.6	9.5	7.6
	Max.	1146	12	155	51	659	20	264	8.2	17.6	7.8
Jan. -	Ave.	1326	19	311	68	1111	13	213	7.5	2.0	7.5
	Max.	1431	25	426	87	1476	18	307	7.7	2.8	7.7
Feb. -	Ave.	1521	11	201	45	818	12	228	8.4	3.3	7.5
	Max.	1562	14	262	51	955	16	295	8.8	5.6	7.7
Mar. -	Ave.	1208	12	179	55	824	23	342	7.8	7.2	7.5
	Max.	1507	15	211	75	1052	34	473	8.8	21.8	7.8
Apr. -	Ave.	1076	6	80	38	508	18	237	8.3	5.1	7.7
	Max.	1312	9	112	53	662	27	336	8.8	6.2	7.7
May -	Ave.										
	Max.										
June -	Ave.										
	Max.										
July -	Ave.										
	Max.										
Aug. -	Ave.										
	Max.										
Sept. -	Ave.										
	Max.										

NPDES Permit Limits - December 1 through April 30

Ave.	-	32	431	-	1462	-	674	> 6.0	13	6.0 - 9.0
Max.	-	43	800	-	2713	-	1396		28	

NPDES Permit Limits - May 1 through November 30

Ave.	-	26	357	-	1212	-	674	> 6.0	13	6.0 - 9.0
Max.	-	40	744	-	2523	-	1396		28	

LABORATORY - H. G. ColemanSafetyA. Safety

There were no safety incidents in the Laboratory this month. The safety meeting was four-hour first aid training review given by V. A. Belk.

B. Customer RelationsCustomer Contacts

4/26 - Richard Williams visited Comm/Scope as part of an Aberdeen manufacturing team organized by Chris Turner to express our commitment towards quality.

4/26 - Harold Coleman accompanied Mike Nathan and Virgil Fisher to discuss the quality of toll-produced 80273G.

4/27 - Harold Coleman visited Hoechst Celanese along with Tom Davis and Leland Haefner to discuss quality issues and product testing.

4/28 - Harold Coleman accompanied Tom Davis and Diana Fenton to Klockner to discuss quality concerns.

Requests for Corrective Action

<u>Date</u>	<u>Customer</u>	<u>Product</u>	<u>Reason</u>
04/03/88	Poly-Tex Company	169-185 WHT 144	Gloss; impact; production rates.

Customer Problem Reports

<u>Date</u>	<u>Customer</u>	<u>Product</u>	<u>Reason</u>
04/05/88	Precision Trim Boaz, AL	14941	Rough extrusion.

Production Return Notifications

<u>Date</u>	<u>Customer</u>	<u>Product</u>	<u>Amount</u>	<u>Reason</u>
04/04/88	Astro Plastics Covington, PA	RP-201T NAT 101	10,400 lbs.	Color
04/26/88	Macklenburg Duncan Oklahoma City, OK	18961 WHT 366	16,890 lbs.	Heat Stability
04/28/88	Prestolite Port Huron, MI	35031 NAT	40,000 lbs.	Streamers
04/25/88	Trim Plastics Springville, AL	17462 GRY 545	7,950 lbs.	Processability

VAB.0001190956

LABORATORY - Continued

B. Customer Relations - continued

Waivers

There were no product waivers for April.

C. 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 during the month of April, 1988.

	Reactor Slurries	Dryer	
		5265	5305
Number of Samples	936	34	60
Average ppm, RVCM	151	0.4	0.5

RVCM of Shipment Samples

The following is a summary of the residual VCM analysis of shipment samples for the month of April, 1988.

<u>Product</u>	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5415</u>	<u>5465</u>	<u>Dry Blend</u>	<u>Pond</u>	<u>Debox</u>
No. of Samples	42	133	37	51	6	52	4	32
Average RVCM, ppm	0.1	0.2	0.2	0.1	0.2	0.1	3.4	0.2

D. Resin Process Capabilities

	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5415</u>	<u>5465</u>
Bulk Density	1.29	1.25	1.88	0.60	3.19
Inherent Viscosity	0.76	1.27	0.58	0.45	0.42
"L" Color Value	4.67	4.00	2.53	3.33	3.42
"A" Color Value	3.33	8.33	—	—	—
"B" Color Value	1.17	1.00	1.17	1.83	2.00
(% on Pan) (vs. 2% max.)	2.67	2.67	1.52	1.94 0.28	3.67 0.33
% thru 140M	1.44	1.62	1.64	2.47	2.22
Drytime	—	—	0.33	0.44	0.44
Mets I.R. (vs. 95% of Control)	—	—	—	2.13 1.15	3.86 2.06
Hard Particles (% > 10)	—	—	3.1	2.6	21.2

LABORATORY - ContinuedE. Compound Quality Summary

	<u>Adjustments</u>	<u>Rejections</u>
	<u>M Lbs. (%)</u>	<u>M Lbs. (%)</u>
Hardness	79.0 (0.99)	6.8 (0.09)
Color/Clarity	14.0 (0.18)	12.9 (0.16)
Hard Particles	— —	44.9 (0.56)
Dispersion	— —	17.9 (0.22)
Dicing	— —	6.4 (0.08)
Total	93.0 (1.17)	88.9 (1.12)

F. Dry Blend Quality Summary

	<u>Rejections</u>
	<u>M Lbs. (%)</u>
Color	48.0 (0.78)
Total	48.0 (0.78)

G. Quality Development

1. Harold Coleman, Richard Williams and Brian Harrison attended the first three days of Team Management Training.
2. Harold Coleman attended Experimental Design in Houston April 18-21.
3. 5415 Control Resin (Lot 04169) Testing Results:

	<u>n</u>	<u>$\bar{X}$</u>	<u>$3\bar{\sigma}$</u>
Moisture	58	0.157	0.03
Drytime, min.	30	5.07	0.33
Particle Size - 60 Mesh	60	1.20	0.46
- 80 Mesh	60	31.40	4.31
- 100 Mesh	60	33.67	1.17
- 120 Mesh	60	20.63	2.54
- 140 Mesh	60	6.94	1.51
- 200 Mesh	60	4.78	2.19
- Pan	48	1.25	0.60
Bulk Density	30	0.5124	0.0178
Color - L	58	100.556	0.261
a	58	-0.138	0.131
b	60	2.416	0.350
Flow Time	29	7.42	0.71
Hard Particles	60	6.97	3.46
Inherent Viscosity	28	1.0036	0.0157

H. Miscellaneous

1. Brian Harrison visited Americhem (colorant supplier) on 4/6 to discuss color matching, unstabilized concentrates and Q.C. procedures.
2. Brian Harrison instituted the switch from stabilized to unstabilized color concentrates in dry blend production. Also, the switch was made from KM-330 to KM-334 impact modifier and DuPont's Edgemoor-produced TiO_2 was approved.

LABORATORY - continued

H. Miscellaneous - continued

3. Raw material specification sheets were updated by Dave Cox on disk and circulated internally for approvals.
4. Harold Coleman attended Quality Expo TIME in Chicago on April 12-13. Of interest were seminars on precision testing plus exhibits of new Q.C. equipment.
5. Brian Harrison completed six color matches for Omega Plastics, Aluminum Products, Comm/Scope (2), Corelmex, and National Extrusions.
6. Brian Harrison attended the Dry Blend New Product Definition Team Meeting in Memphis on 4/26/88.

SAMPLE SHIPMENTS

APRIL 1988

RESIN

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
4/04/88	5385	50 lbs.	Davidson Technology Cent
	5415	50 lbs.	
4/14/88	5265	2250 lbs.	Arlington Mills
4/15/88	5385	1000 lbs.	Gold Bond
4/15/88	5415	50 lbs.	Crane Plastics
4/21/88	5385	5 lbs.	Borden Chemicals
	5415	5 lbs.	

COMPOUND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
4/11/88	34642 NAT	100 lbs.	Atlas Wire
4/15/88	38401 BLK (BC)	50 lbs.	Polychem Electronics
4/21/88	18162 NAT	1500 lbs.	Gossen Corp.
4/26/88	18031 CB 50	10 lbs.	Compression Polymers
4/26/88	38931 NAT	50 lbs.	Rayton Electric Ltd.
4/29/88	17121 WAT CL	5 lbs.	Protomold
4/29/88	17121 WAT CL	100 lbs.	California Insulated Wire & Cable
4/29/88	18162 NAT	50 lbs.	Fiberchem

DRYBLEND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
4/29/88	186-74 WHT 112	100 lbs.	Americhem Inc.

SHIPMENTS BY PRODUCT - M LBS.

April 1988FISCAL
YEAR-TO-DATE

RESIN	29,441	212,506
PLASTICIZER	484	4,517
DRYBLEND	5,479	37,225
COMPOUND	6,407	49,158
TOTAL	41,811	303,406

NUMBER OF SHIPMENTS BY MODE:

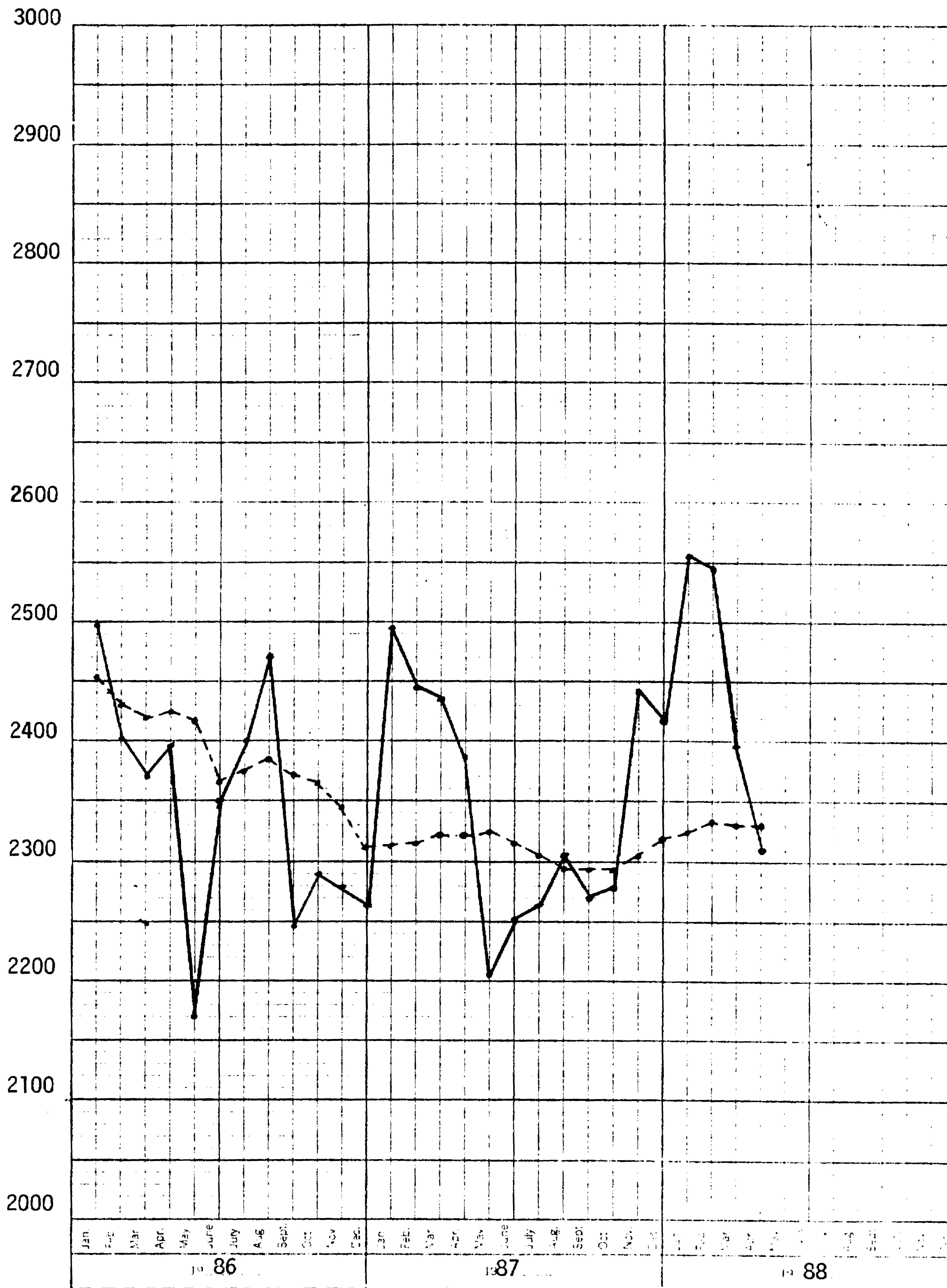
	RAILCAR	VISTA BULK	TRUCK VAN	TRAILER ON A FLAT CAR	COMMON CARRIER	CUSTOMER PICK-UP	CONTAINER	TOTAL
RESIN-Bulk	128	48			3	95		274
Package			5	1	7	7		20
Export								
PLAST.-Bulk	2	3						5
Package					2			2
DRYBLEND-Bulk	25	8				8		4
Package			4		12	1		17
Export								
COMPOUND-Bulk	15	4						19
Package			35		33	30		98
Export					1		6	7
TOTAL	170	63	44	1	58	141	6	483

ENERGY USAGE

46 3290

BTU/LB.

3 YEARS BY MONTHS X 100 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.



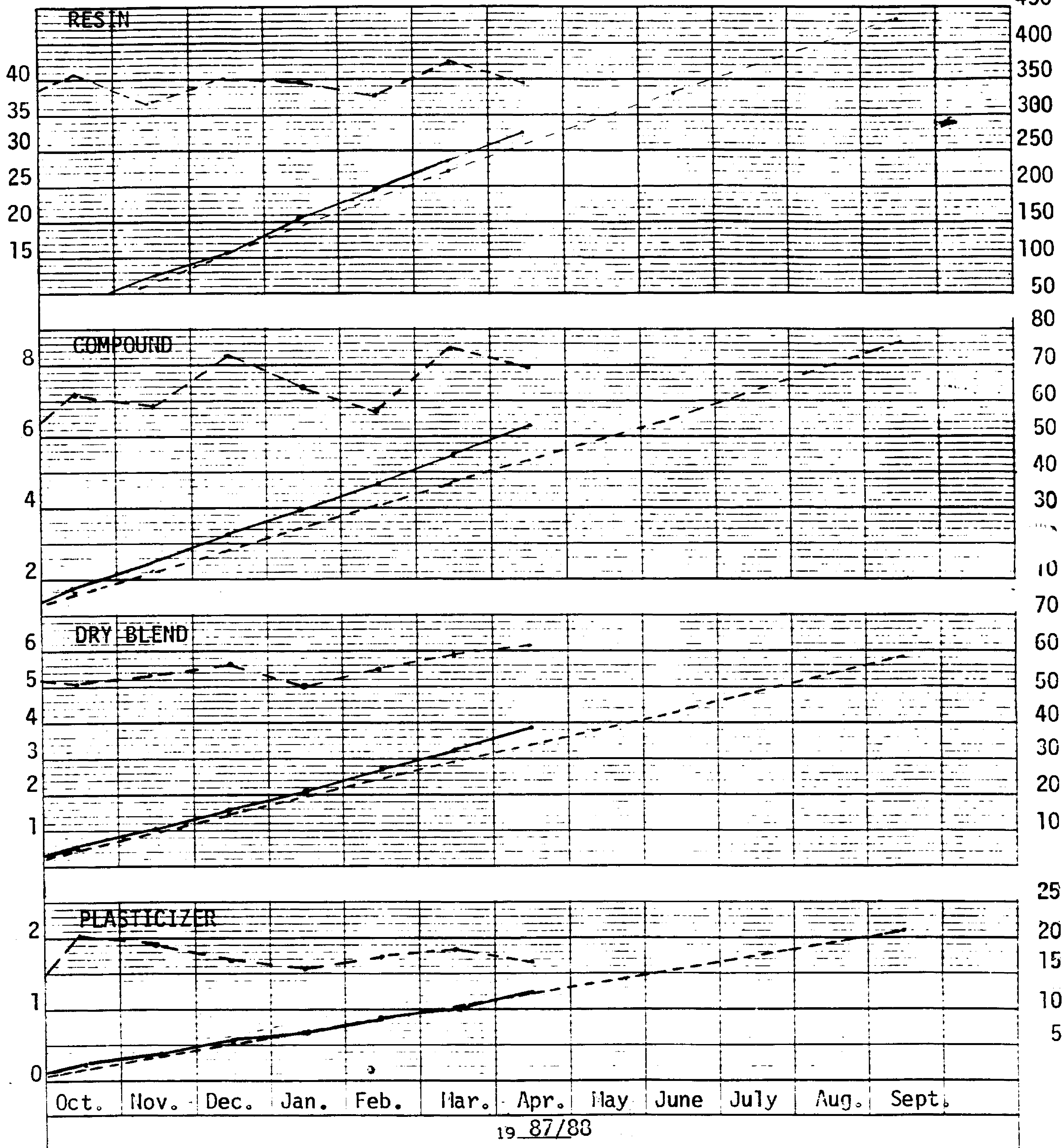
———— Monthly
----- 12-Month Moving Average

ABERDEEN PLANT PRODUCTION

10/01/87 - 09/30/88

MM POUNDS
MONTHLY

MM POUNDS
CUMULATIVE

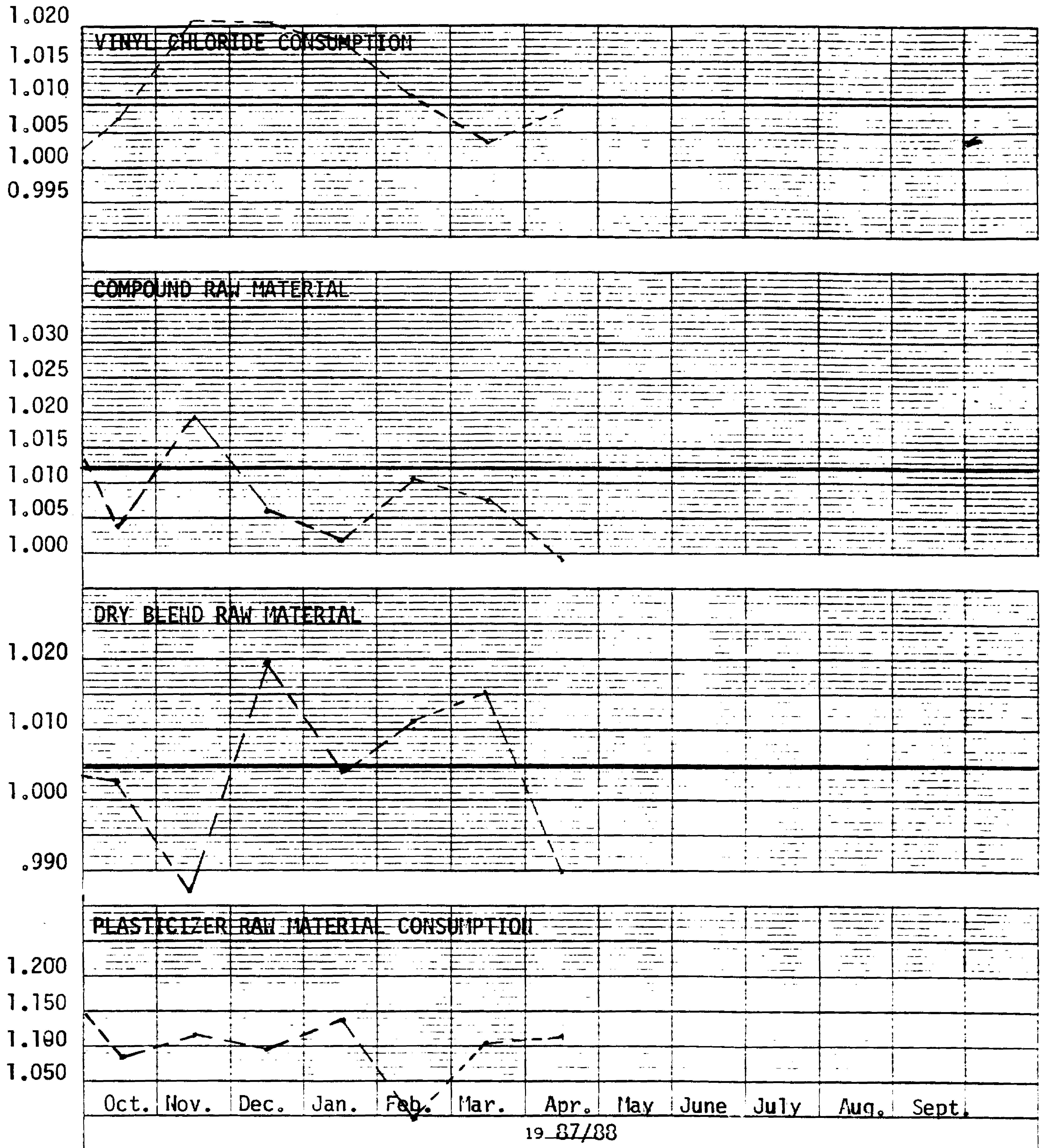


----- Budget
 Actual
 _____ Cumulative

ABERDEEN PLANT EFFICIENCY

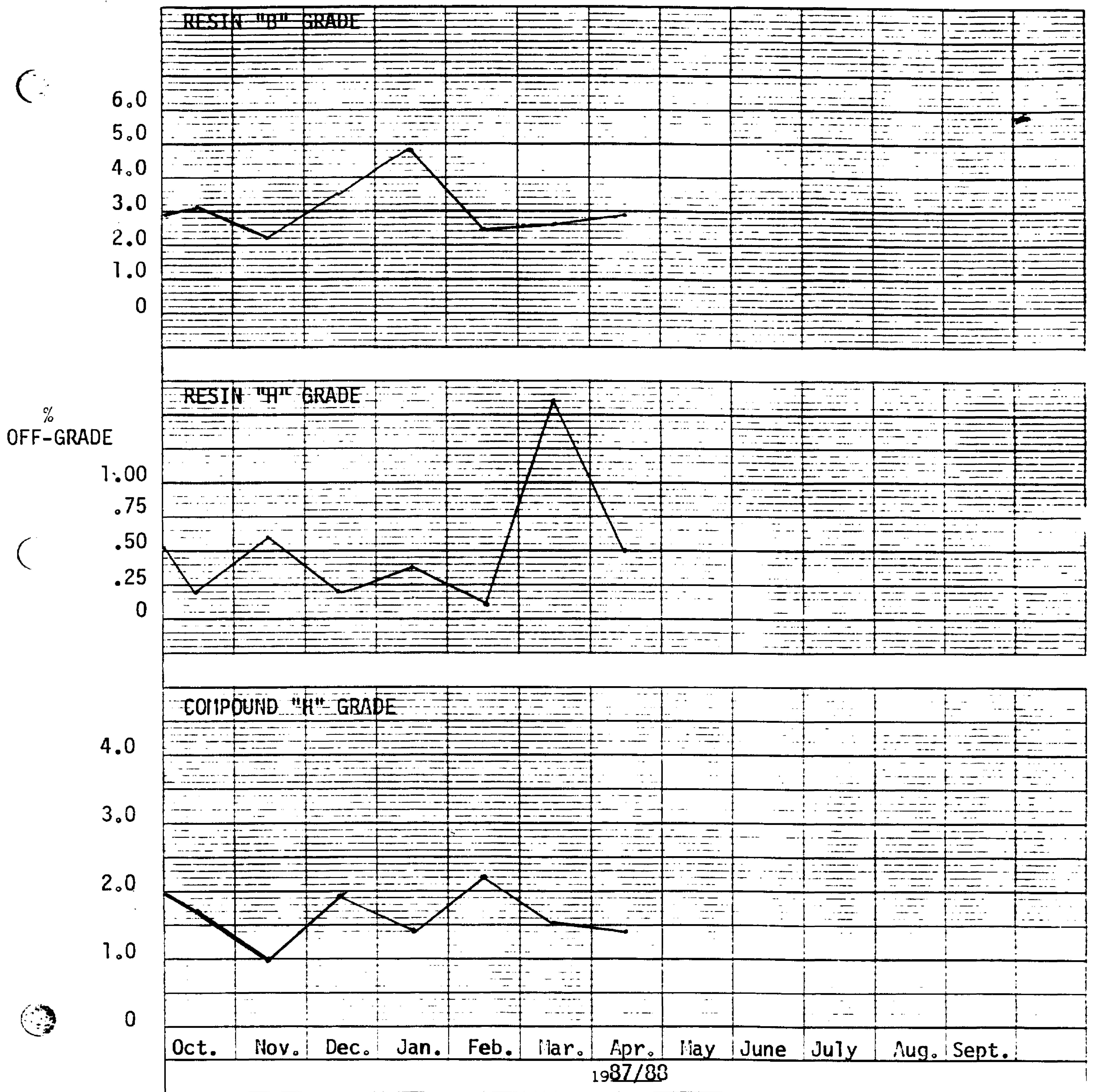
10/01/87 - 09/30/88

POUNDS OF RAW MATERIAL/POUNDS OF PRODUCT



ABERDEEN PLANT QUALITY PERFORMANCE

10/01/87 - 09/30/88



ABERDEEN PLANT INVENTORIES

10/01/87 - 09/30/88

MM
POUNDS
PRIME

